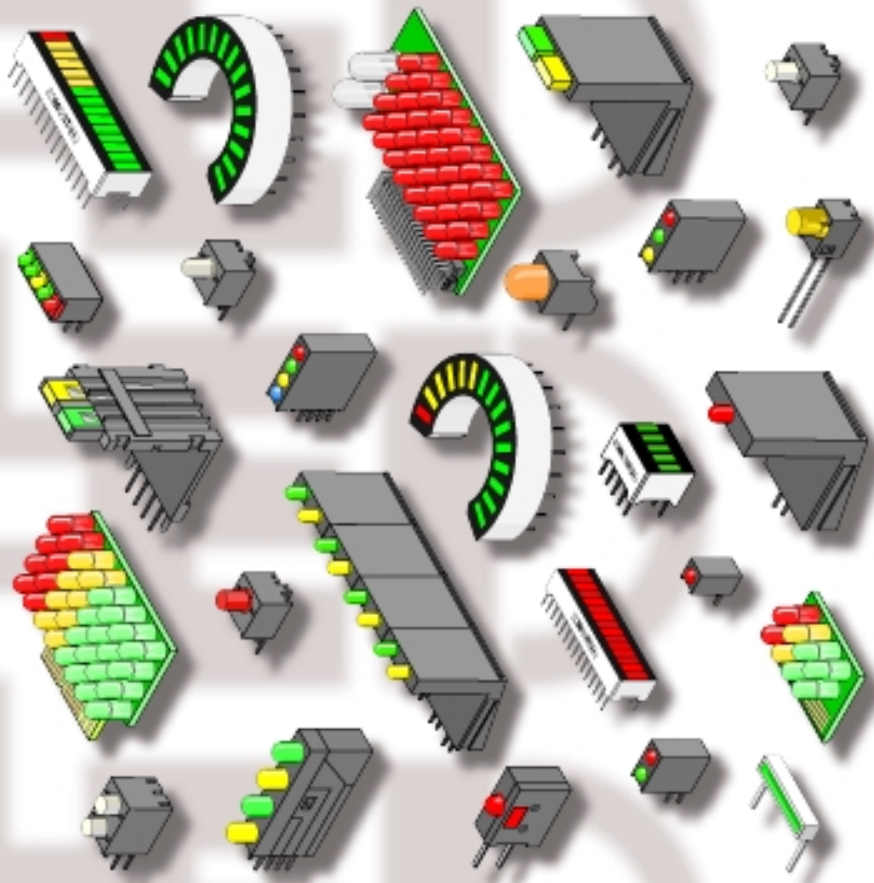


PCB

Printed Circuit Board LED Lamps



LED[®]
LEDTRONICS, INC.[®]
THE FUTURE OF LIGHT

23105 Kashiwa Court, Torrance, CA 90505
Phone: (800) 579-4875 or (310) 534-1505
Fax: (310) 534-1424
E-mail: webmaster@ledtronics.com
Website: www.ledtronics.com

In addition to pioneering low-heat generating **PCB** (Printed Circuit Board) LEDs, **LEDTRONICS** developed heat-resistant housings that withstand the intensity of vapor-phase and reflow soldering processes. **LEDTRONICS** continues to lead in innovation as we expand our **PCB** LED product line to include:

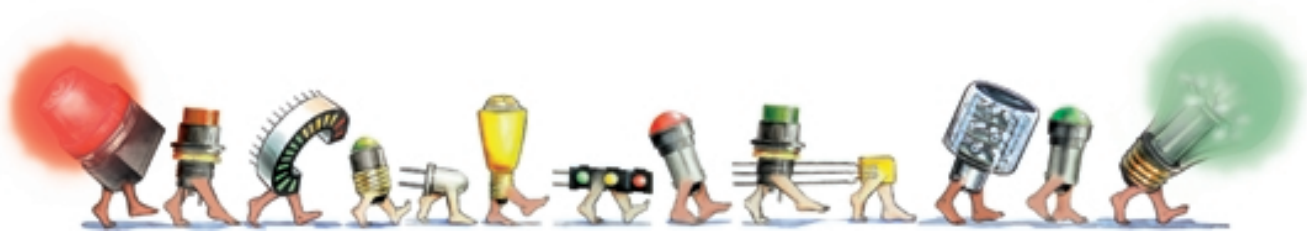
- Ultra-miniature T³/₄ LEDs
- Long-lasting, versatile multi-step, multi-chip and multi-color LEDs
- Bi-level LED arrays or units that may be configured with LEDs of all the same color or with multiple colors
- Multi-color Bargraph LEDs featuring interlocking stations that are available in customizable lengths
- SMT, standard and right-angle (90°) mountings

For **PCB**-mount LED applications, LEDtronics offers the most complete and diversified selection of "Problem Solvers" available from any source in the industry, making cross-referencing our major competitors easy. Peruse our Printed Circuit Board LED Lamps catalog. If you don't see the **PCB** LED that you need, contact **LEDTRONICS**.

There's an excellent chance that in the time it took to publish this catalog we have already developed the solution that you seek. If we haven't, we can design one tailored to your application.

Due to properties distinctive to different types of LEDs, the correct solution to your specific application is subject to many variables. With that in mind and to assure success, we ask that you answer the questionnaire included in the preface of this catalog as precisely as possible. With this information to guide us, you can be certain that **LEDTRONICS** will supply the part right for your application.

Remember, when it comes to **PCB** LEDs, you don't have to take the heat. See the light, instead. With **LEDTRONICS PCB** LEDs.



LEDTRONICS, INC.[®]
THE FUTURE OF LIGHT

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PCB LED Questionnaire

Date _____

About you

The following information assist in determining the most appropriate LED product to supply as a SAMPLE. For fast response fax to (310) 534-1424.

Name: _____ Phone: (____) _____
 Company: _____ Fax: (____) _____
 Address: _____ M/S: _____
 City: _____ State: _____ Zip: _____
 E-Mail: _____ Company Website: www. _____

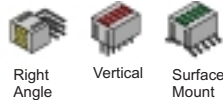
About your company

What does your company manufacture _____
 Is your company ☐ Govt/Military ☐ Govt Contractor ☐ OEM ☐ Distributor ☐ Utility ☐ MRO
 Requirement is for ☐ R&D ☐ Replacement ☐ New Application ☐ Other _____
 Total annual quantity _____
 Target price _____ Time frame ☐ Immediate ☐ 3 months ☐ 6 months

For internal use only

SIC code: _____
 Originator: _____
 Rep: _____
 Current Customer ☐ Yes ☐ No

About your application



LED type ☐ Right Angle ☐ Vertical ☐ SMT ☐ Arrays ☐ Other _____

Package type ☐ 1 Level ☐ Bi-level ☐ Tri-level ☐ Quad-level ☐ Other _____

LED size ☐ 2mm ☐ T1 (3mm) ☐ T1 3/4 (5mm) ☐ 2 x 5mm ☐ Other _____



LED Shape ☐ Dome ☐ Rectangular ☐ Square ☐ Cylindrical ☐ Panel dot ☐ Other _____



LED color ☐ Red ☐ Orange ☐ Amber ☐ Yellow ☐ White ☐ Green ☐ Blue ☐ Other _____

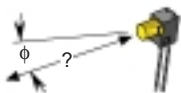
LED lens type ☐ Diffused ☐ Waterclear ☐ Tinted clear LED lead type ☐ Uncut ☐ Cut _____

Current LED manufacturer _____ Part no./Specs. _____



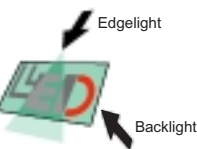
Current Limiting Resistor ☐ External ☐ Internal Value _____ Ohm ☐ Low Current _____ mA

Ambient lighting conditions ☐ Indirect sunlight ☐ Direct sun ☐ Office ☐ Lowlight ☐ Darkroom



Maximum viewing distance desired ☐ 1 ft ☐ 5 ft ☐ 10 ft ☐ 20 ft ☐ 50 ft ☐ Other _____

Maximum viewing angle desired ☐ Straight on ☐ 30° ☐ 60° ☐ 90° ☐ Other _____



Application as ☐ Indicator ☐ Illuminator ☐ Backlighting ☐ Edgelighting ☐ Lightpipe ☐ Other _____

Would like updated literature ☐ Yes ☐ No More info on: ☐ Based ☐ Panel ☐ PCB ☐ Discrete ☐ Other _____

Applicable statutory and regulatory requirements ☐ Yes ☐ No Doc. No. _____

Additional Notes/Sketches

Features

- 1.8mm sized LEDs save space
- Housing material meets UL94V-0
- Facilitates PCB mounting
- Fast turn on/off time I.C. compatible
- Colors can be mixed in a single housing
- Solid-state, high shock/vibration resistant
- Single color or bicolor configurations
- LED operating life: 100,000+ hrs (10+ years)
- One piece housing
- Three-year warranty

Custom Options

(for qualified applications)

- Sunlight Visible Ultrabrights
- Low current (2mA) LEDs
- Special colors: Orange, Pure Green, Blue
- Infrareds 840nm, 880nm, 940nm
- Clear illuminator LEDs for backlighting

Part Number	Emitted Color	Lens Color/Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

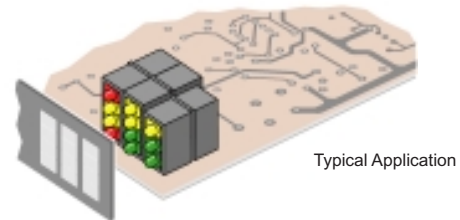
1.8mm Tri-Level Indicator LEDs

	31PCT070TR4	RED		RED Diffused	10	12.5	2.0/2.6	625	40°	1
	31PCT070TY4	YELLOW		YEL Diffused	10	5.5	2.1/2.6	590	40°	
	31PCT070TG4	GREEN		GRN Diffused	10	5.5	2.2/2.6	565	40°	
	31PCT070TWRG4	RED		Milky White	20	4.0	2.0/2.6	635	40°	
		GREEN			20	4.0	2.2/2.6	568	40°	
	31PCT070TWYG4	YELLOW		Milky White	10	2.4	2.1/2.6	585	40°	
		GREEN			10	4.0	2.2/2.6	568	40°	

1.8mm Quad-Level Indicator LEDs

	41PCT070TR4	RED		RED Diffused	10	12.5	2.0/2.6	625	40°	2
	41PCT070TY4	YELLOW		YEL Diffused	10	5.5	2.1/2.6	590	40°	
	41PCT070TG4	GREEN		GRN Diffused	10	5.5	2.2/2.6	565	40°	
	41PCT070TWRG4	RED		Milky White	10	4.0	2.0/2.6	635	40°	
		GREEN			10	4.0	2.2/2.6	568	40°	
	41PCT070TWYG4	YELLOW		Milky White	10	2.4	2.1/2.6	585	40°	
		GREEN			10	4.0	2.2/2.6	568	40°	

Custom Options: OEM large quantity requirements



Typical Application

Examples of part number ordering code

All LEDs same color			
41PCT070TG4			
No. of LEDs high	No. of LEDs across	LED color	Body style
			Lens type: T = diffused

All LEDs same Bicolor			
41PCT070TWWG4			
No. of LEDs high	No. of LEDs across	LED color	Body style
			Lens type: TW = Milky White

Mixed colors same type LED			
41PCT070T4-Y/Y/Y/G			
No. of LEDs high	No. of LEDs across	LED (1),(2),(3),(4) color	Body style
			Lens type: T = diffused

Figure 1. Tri-Level Indicator LEDs

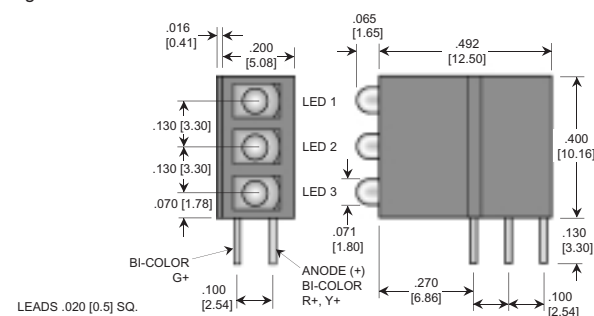
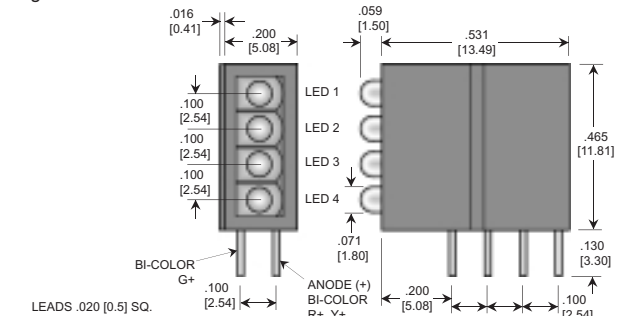


Figure 2. Quad-Level Indicator LEDs



Log # 125A pg1 Rev 07-2001



1.8mm Right-Angled PCB LEDs, 0.100" Centerline

Part Number	Emitted Color	Lens Color/ Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2 $\theta_{1/2}$	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ_p (nm)		

1.8mm Right-Angle Indicator (2 LEDs)

	12PCT070TR4	RED	RED Diffused	10	12.5	2.0/2.6	625	40°	1
	12PCT070TY4	YELLOW	YEL Diffused	10	5.5	2.1/2.6	590	40°	
	12PCT070TG4	GREEN	GRN Diffused	10	5.5	2.2/2.6	565	40°	
	12PCT070TWRG4	RED	Milky White	10	4.0	2.0/2.6	635	40°	
		GREEN		10	4.0	2.2/2.6	568	40°	
	12PCT070TWYG4	YELLOW	Milky White	10	2.4	2.1/2.6	585	40°	
		GREEN		10	4.0	2.2/2.6	568	40°	

1.8mm Right-Angle Indicator (3 LEDs)

	13PCT070TR4	RED	RED Diffused	10	12.5	2.0/2.6	625	40°	1
	13PCT070TY4	YELLOW	YEL Diffused	10	5.5	2.1/2.6	590	40°	
	13PCT070TG4	GREEN	GRN Diffused	10	5.5	2.2/2.6	565	40°	
	13PCT070TWRG4	RED	Milky White	10	4.0	2.0/2.6	635	40°	
		GREEN		10	4.0	2.2/2.6	568	40°	
	13PCT070TWYG4	YELLOW	Milky White	10	2.4	2.1/2.6	585	40°	
		GREEN		10	4.0	2.2/2.6	568	40°	

1.8mm Right-Angle Indicator (4 LEDs)

	14PCT070TR4	RED	RED Diffused	10	12.5	2.0/2.6	625	40°	1
	14PCT070TY4	YELLOW	YEL Diffused	10	5.5	2.1/2.6	590	40°	
	14PCT070TG4	GREEN	GRN Diffused	10	5.5	2.2/2.6	565	40°	
	14PCT070TWRG4	RED	Milky White	10	4.0	2.0/2.6	635	40°	
		GREEN		10	4.0	2.2/2.6	568	40°	
	14PCT070TWYG4	YELLOW	Milky White	10	2.4	2.1/2.6	585	40°	
		GREEN		10	4.0	2.2/2.6	568	40°	

1.8mm Right-Angle Indicator (5 LEDs)

	15PCT070TR4	RED	RED Diffused	10	12.5	2.0/2.6	625	40 _i	1
	15PCT070TY4	YELLOW	YEL Diffused	10	5.5	2.1/2.6	590	40 _i	
	15PCT070TG4	GREEN	GRN Diffused	10	5.5	2.2/2.6	565	40 _i	
	15PCT070TWRG4	RED	Milky White	10	4.0	2.0/2.6	635	40 _i	
		GREEN		10	4.0	2.2/2.6	568	40 _i	
	15PCT070TWYG4	YELLOW	Milky White	10	2.4	2.1/2.6	585	40 _i	
		GREEN		10	4.0	2.2/2.6	568	40 _i	

1.8mm Right-Angle Indicator (8 LEDs)

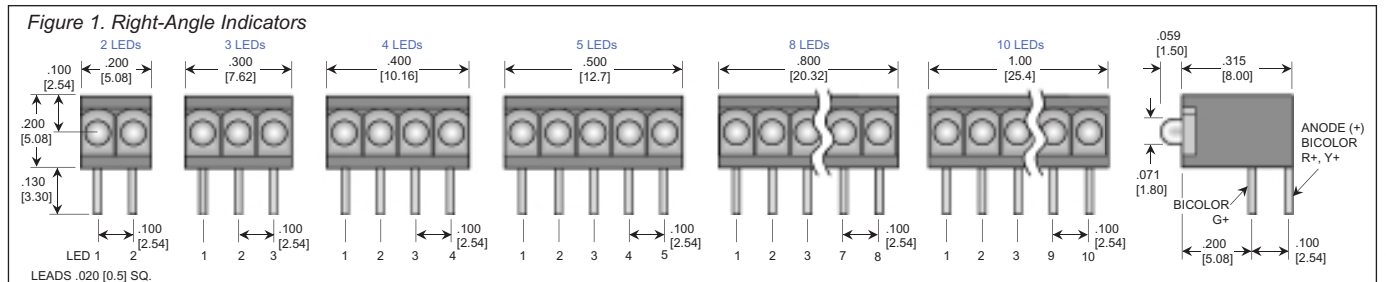
	18PCT070TR4	RED	RED Diffused	10	12.5	2.0/2.6	625	40°	1
	18PCT070TY4	YELLOW	YEL Diffused	10	5.5	2.1/2.6	590	40°	
	18PCT070TG4	GREEN	GRN Diffused	10	5.5	2.2/2.6	565	40°	
	18PCT070TWRG4	RED	Milky White	10	4.0	2.0/2.6	635	40°	
		GREEN		10	4.0	2.2/2.6	568	40°	
	18PCT070TWYG4	YELLOW	Milky White	10	2.4	2.1/2.6	585	40°	
		GREEN		10	4.0	2.2/2.6	568	40°	

1.8mm Right-Angle Indicator (10 LEDs)

	110PCT070TR4	RED	RED Diffused	10	12.5	2.0/2.6	625	40°	1
	110PCT070TY4	YELLOW	YEL Diffused	10	5.5	2.1/2.6	590	40°	
	110PCT070TG4	GREEN	GRN Diffused	10	5.5	2.2/2.6	565	40°	
	110PCT070TWRG4	RED	Milky White	10	4.0	2.0/2.6	635	40°	
		GREEN		10	4.0	2.2/2.6	568	40°	
	110PCT070TWYG4	YELLOW	Milky White	10	2.4	2.1/2.6	585	40°	
		GREEN		10	4.0	2.2/2.6	568	40°	

Custom Options: OEM large quantity requirements

Bicolor LED Projection .075



Log # 125A pg2 Rev 07-2001



1.8mm Vertical PCB LEDs, 0.100" Centerline

1.8mm Vertical Indicator (2 LEDs)

Part Number	Emitted Color	Lens Color/Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		
	12PCV070TR4	RED	10	12.5	2.0/2.6	625	40°	1
	12PCV070TY4	YELLOW	10	5.5	2.1/2.6	590	40°	
	12PCV070TG4	GREEN	10	5.5	2.2/2.6	565	40°	
	12PCV070TWRG4	RED	10	4.0	2.0/2.6	635	40°	
	12PCV070TWYG4	GREEN	10	4.0	2.2/2.6	568	40°	
		YELLOW	10	2.4	2.1/2.6	585	40°	

1.8mm Vertical Indicator (3 LEDs)

	13PCV070TR4	RED	10	12.5	2.0/2.6	625	40°	1
	13PCV070TY4	YELLOW	10	5.5	2.1/2.6	590	40°	
	13PCV070TG4	GREEN	10	5.5	2.2/2.6	565	40°	
	13PCV070TWRG4	RED	10	4.0	2.0/2.6	635	40°	
		GREEN	10	4.0	2.2/2.6	568	40°	
	13PCV070TWYG4	YELLOW	10	2.4	2.1/2.6	585	40°	

1.8mm Vertical Indicator (4 LEDs)

	14PCV070TR4	RED	10	12.5	2.0/2.6	625	40°	1
	14PCV070TY4	YELLOW	10	5.5	2.1/2.6	590	40°	
	14PCV070TG4	GREEN	10	5.5	2.2/2.6	565	40°	
	14PCV070TWRG4	RED	10	4.0	2.0/2.6	635	40°	
		GREEN	10	4.0	2.2/2.6	568	40°	
	14PCV070TWYG4	YELLOW	10	2.4	2.1/2.6	585	40°	

1.8mm Vertical Indicator (5 LEDs)

	15PCV070TR4	RED	10	12.5	2.0/2.6	625	40°	1
	15PCV070TY4	YELLOW	10	5.5	2.1/2.6	590	40°	
	15PCV070TG4	GREEN	10	5.5	2.2/2.6	565	40°	
	15PCV070TWRG4	RED	10	4.0	2.0/2.6	635	40°	
		GREEN	10	4.0	2.2/2.6	568	40°	
	15PCV070TWYG4	YELLOW	10	2.4	2.1/2.6	585	40°	

1.8mm Vertical Indicator (8 LEDs)

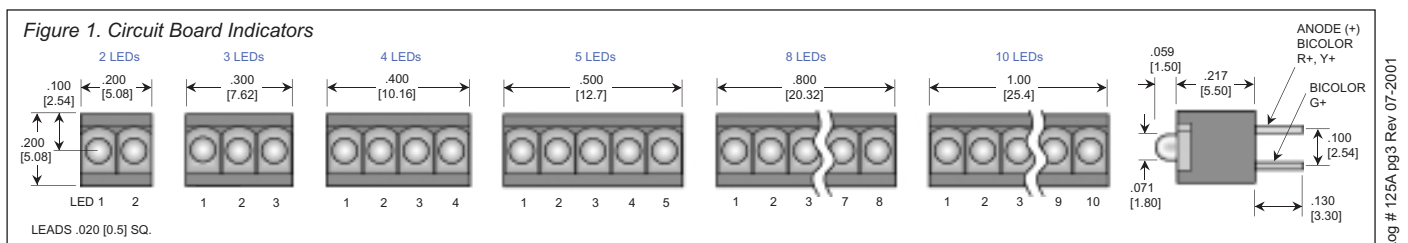
	18PCV070TR4	RED	10	12.5	2.0/2.6	625	40°	1
	18PCV070TY4	YELLOW	10	5.5	2.1/2.6	590	40°	
	18PCV070TG4	GREEN	10	5.5	2.2/2.6	565	40°	
	18PCV070TWRG4	RED	10	4.0	2.0/2.6	635	40°	
		GREEN	10	4.0	2.2/2.6	568	40°	
	18PCV070TWYG4	YELLOW	10	2.4	2.1/2.6	585	40°	

1.8mm Vertical Indicator (10 LEDs)

	110PCV070TR4	RED	10	12.5	2.0/2.6	625	40°	1
	110PCV070TY4	YELLOW	10	5.5	2.1/2.6	590	40°	
	110PCV070TG4	GREEN	10	5.5	2.2/2.6	565	40°	
	110PCV070TWRG4	RED	10	4.0	2.0/2.6	635	40°	
		GREEN	10	4.0	2.2/2.6	568	40°	
	110PCV070TWYG4	YELLOW	10	2.4	2.1/2.6	585	40°	

Custom Options: OEM large quantity requirements

Bicolor LED Projection .075



Right-Angle Indicator LEDs

Part Number	Emitted Color	Lens Color/Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		
555M-2001-001	DEEP RED	RED Diffused	10	3.2	1.6/2.0	650	40°	1
555M-2101-001	HE RED	RED Diffused	10	3.0	1.8/3.0	635	40°	
555M-2301-001	HE GREEN	GRN Diffused	10	3.0	2.0/3.0	565	40°	
555M-2401-001	YELLOW	YEL Diffused	10	3.0	2.0/3.0	585	40°	
555M-2003-001*	DEEP RED	RED Diffused	6	6.0	5.0/6.0	650	40°	
555M-2004-001*	DEEP RED	RED Diffused	16	6.0	5.0/6.0	650	40°	
555M-2007-001*	HE RED	RED Diffused	3	6.0	5.0/6.0	635	40°	
555M-2303-001*	HE GREEN	GRN Diffused	5	6.0	5.0/6.0	565	40°	
555M-2403-001*	YELLOW	YEL Diffused	5	6.0	5.0/6.0	585	40°	

Leads are cut to 0.140 on all arrays for "555M" series

* Denotes LED with integrated resistor

Custom Options

Part Number Example: Same Color

555M-2001-004

Body Style
LED Mounting Style
2 = Right Angle
3 = Vertical
Color & Brightness
0 = Gap Red
1 = Hi-Eff Red
3 = Green
4 = Yellow
Resistor LED Value
1 = NR
3 = 5V/5-6mA
4 = 5/10-16mA
7 = 3mA (Red Only)

Part Number Example: Mix Color

555M-2X01-GRG

Body Style
LED Mounting Style
2 = Right Angle
3 = Vertical
Resistor LED Value
1 = No Resistor
3 = 5V/5-6mA
4 = 5/10-16mA
7 = 3mA
LED Color (right)
LED Color (center)
LED Color (left)
Part Number Example: 1 Blank Space
555M-2X01-GxG (Green, Blank, Green)

Vertical Indicator LEDs

 Leads are cut to 0.140 on all arrays for "555M" series * Denotes LED with integrated resistor	555M-3001-001	DEEP RED	RED Diffused	10	3.2	1.6/2.0	650	40°	2
	555M-3101-001	HE RED	RED Diffused	10	3.0	1.8/3.0	635	40°	
	555M-3301-001	GREEN	GRN Diffused	10	3.0	2.0/3.0	565	40°	
	555M-3401-001	YELLOW	YEL Diffused	10	3.0	2.0/3.0	585	40°	
	555M-3003-001*	DEEP RED	RED Diffused	6	6.0	5.0/6.0	650	40°	
	555M-3004-001*	DEEP RED	RED Diffused	16	6.0	5.0/6.0	650	40°	
	555M-3007-001*	HE RED	RED Diffused	3	6.0	5.0/6.0	635	40°	
	555M-3303-001*	HE GREEN	GRN Diffused	5	6.0	5.0/6.0	565	40°	
	555M-3403-001*	YELLOW	YEL Diffused	5	6.0	5.0/6.0	585	40°	

Custom Options

Part Number Example: Same Color

555M-3301-003

Body Style
LED Mounting Style
2 = Right Angle
3 = Vertical
Color & Brightness
0 = Gap Red
1 = Hi-Eff Red
3 = Green
4 = Yellow
Resistor LED Value
1 = NR
3 = 5V/5-6mA
4 = 5/10-16mA
7 = 3mA (Red Only)

Part Number Example: Mix Color

555M-3X01-YGY

Body Style
LED Mounting Style
2 = Right Angle
3 = Vertical
Resistor LED Value
1 = No Resistor
3 = 5V/5-6mA
4 = 5/10-16mA
7 = 3mA
LED Color (right)
LED Color (center)
LED Color (left)
Part Number Example: 1 Blank Space
555M-3X01-GYxY (Green, Yellow, Blank, Yellow)

Custom Options: OEM large quantity requirements

1. Single or Mix Color Arrays
2. Sunlight Visible Clear Illuminator
3. Other Colors Available
4. Reversed Color Polarity Configurations Available

Figure 1. Right-Angle Indicator

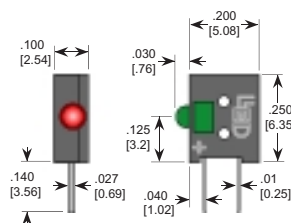
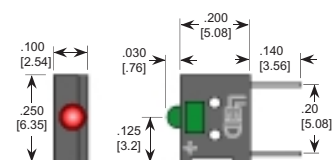


Figure 2. Vertical Indicator



Part Number	Emitted Color	Lens Color/ Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2q _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	I _p (nm)		

Right-Angle (Interlocking) Indicator LEDs

Leads are cut to 0.140 on all arrays for "555M" series * Denotes LED with integrated resistor	SM555M-2001-001	DEEP RED	RED Diffused	10	3.2	1.6/2.0	650	40°	1
	SM555M-2101-001	HE RED	RED Diffused	10	3.0	1.8/3.0	635	40°	
	SM555M-2301-001	GREEN	GRN Diffused	10	3.0	2.0/3.0	565	40°	
	SM555M-2401-001	YELLOW	YEL Diffused	10	3.0	2.0/3.0	585	40°	
	SM555M-2003-001*	DEEP RED	RED Diffused	6	6.0	5.0/6.0	650	40°	
	SM555M-2004-001*	DEEP RED	RED Diffused	16	6.0	5.0/6.0	650	40°	
	SM555M-2007-001*	HE RED	RED Diffused	3	6.0	5.0/6.0	635	40°	
	SM555M-2303-001*	HE GREEN	GRN Diffused	5	6.0	5.0/6.0	565	40°	
	SM555M-2403-001*	YELLOW	YEL Diffused	5	6.0	5.0/6.0	585	40°	

Custom Options

Part Number Example: Same Color

SM555M-2401-003

Arrayable Design

Body Style
LED Mounting Style
2 = Right Angle
3 = Vertical

Color & Brightness
0 = Gap Red
1 = Hi-Eff Red
3 = Green
4 = Yellow

Number in Array
Resistor LED Value
1 = No Resistor
3 = 5V/5-6mA
4 = 5/10-16mA
7 = 3mA (Red Only)



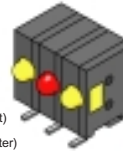
Part Number Example: Mix Color

SM555M-2X01-YRY

Body Style
LED Mounting Style
2 = Right Angle
3 = Vertical

Resistor LED Value
1 = No Resistor
3 = 5V/5-6mA
4 = 5/10-16mA
7 = 3mA

LED Color (right)
LED Color (center)
LED Color (left)



Part Number Example: 1 Blank Space
SM555M-2X01-YxY (Yellow, Blank, Yellow)

Vertical (Interlocking) Indicator LEDs

Leads are cut to 0.140 on all arrays for "555M" series * Denotes LED with integrated resistor	SM555M-3001-001	DEEP RED	RED Diffused	10	3.2	1.6/2.0	650	40°	4
	SM555M-3101-001	HE RED	RED Diffused	10	3.0	1.8/3.0	635	40°	
	SM555M-3301-001	GREEN	GRN Diffused	10	3.0	2.0/3.0	565	40°	
	SM555M-3401-001	YELLOW	YEL Diffused	10	3.0	2.0/3.0	585	40°	
	SM555M-3003-001*	DEEP RED	RED Diffused	6	6.0	5.0/6.0	650	40°	
	SM555M-3004-001*	DEEP RED	RED Diffused	16	6.0	5.0/6.0	650	40°	
	SM555M-3007-001*	HE RED	RED Diffused	3	6.0	5.0/6.0	635	40°	
	SM555M-3303-001*	HE GREEN	GRN Diffused	5	6.0	5.0/6.0	565	40°	
	SM555M-3403-001*	YELLOW	YEL Diffused	5	6.0	5.0/6.0	585	40°	

Custom Options

Part Number Example: Same Color

SM555M-3301-002

Arrayable Design

Body Style
LED Mounting Style
2 = Right Angle
3 = Vertical

Color & Brightness
0 = Gap Red
1 = Hi-Eff Red
3 = Green
4 = Yellow

Number in Array
Resistor LED Value
1 = No Resistor
3 = 5V/5-6mA
4 = 5/10-16mA
7 = 3mA (Red Only)



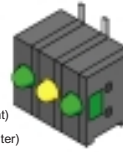
Part Number Example: Mix Color

SM555M-3X01-GYG

Body Style
LED Mounting Style
2 = Right Angle
3 = Vertical

Resistor LED Value
1 = No Resistor
3 = 5V/5-6mA
4 = 5/10-16mA
7 = 3mA

LED Color (right)
LED Color (center)
LED Color (left)



Part Number Example: 1 Blank Space
SM555M-3X01-xGY (Blank, Green, Yellow)

Custom Options: OEM large quantity requirements

1. Single or Mix Color Arrays
2. Sunlight Visible Clear Illuminator
3. Other Colors Available
4. Reversed Color Polarity Configurations Available

Figure 3. Right-Angle Indicator

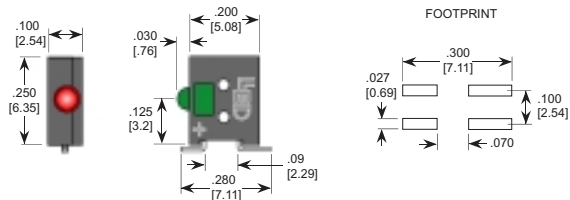
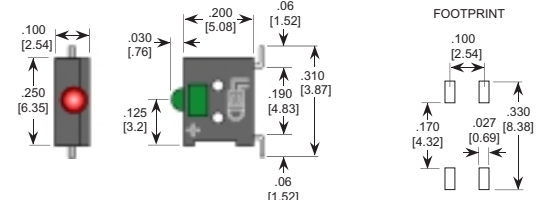


Figure 3. Vertical Indicator



Part Number		Emitted Color	Lens Color/Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
Long Lead (0.500" Min.)	Short Lead (0.140")				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1 (3mm) High-Efficiency (Diffused) LEDs

	PC120TR6	PC120TR6-140	ULTRA RED	RED Diffused	Standard	20	100	1.7/2.6	660	45°	1
	PC120TR4 (5)	PC120TR4-140	HE RED	RED Diffused	Standard	20	24	2.0/2.8	635	45°	
	PC120TR1	PC120TR1-140	STD RED	RED Diffused	Standard	20	3	1.7/2.0	665	45°	
	PC120TO4 (5)	PC120TO4-140	ORANGE	ORN Diffused	Standard	20	30	2.1/2.8	610	45°	
	PC120TY4 (5)	PC120TY4-140	YELLOW	YEL Diffused	Standard	20	22	2.1/2.8	585	45°	
	PC120TG4 (5)	PC120TG4-140	HE GREEN	GRN Diffused	Standard	20	18	2.1/2.8	565	45°	
	PC120TUB5	PC120TUB5-140	ULTRA BLUE	BLU Diffused	Standard	20	2.4	3.8/5.0	430	45°	

T1 (3mm) Sunlight-Visible (Diffused) LEDs

	PC120T-OUR	PC120T-OUR-140	ULTRA RED	RED Diffused	Standard	20	700	2.0/2.6	660	45°	1
	PC120T-OUO	PC120T-OUO-140	ORANGE	ORN Diffused	Standard	20	1000	2.0/2.6	610	45°	
	PC120T-OUY	PC120T-OUY-140	YELLOW	YEL Diffused	Standard	20	480	2.0/2.6	592	45°	
	PC120T-UG	PC120T-UG-140	LIME GREEN	GRN Diffused	Standard	20	300	2.0/2.6	570	45°	
	PC120T-1AG	PC120T-1AG-140	AQUA GREEN	GRN Diffused	Standard	20	300	3.5/4.0	523	45°	
	PC120T-1PB	PC120T-1PB-140	PURE BLUE	BLU Diffused	Standard	20	120	3.6/4.0	470	45°	

T1 (3mm) 2mA Low Current (Diffused) LEDs

See Above	PC120TR5N-LC	PC120TR5N-140/LC	HE RED	RED Diffused	Standard	2	2.2	1.8/2.2	635	45°	1
	PC120TY5N-LC	PC120TY5N-140/LC	YELLOW	YEL Diffused	Standard	2	2.3	1.9/2.7	585	45°	
	PC120TG5N-LC	PC120TG5N-140/LC	HE GREEN	GRN Diffused	Standard	2	2.2	1.8/2.2	568	45°	

T1 (3mm) High-Efficiency (Tinted) LEDs

See Above	PC120CR4 (5)	PC120CR4-140	HE RED	RED Clear	Standard	20	100	2.0/2.6	635	30°	1
	PC120CY4 (5)	PC120CY4-140	YELLOW	YEL Clear	Standard	20	90	2.1/2.6	585	30°	
	PC120CG4 (5)	PC120CG4-140	HE GREEN	GRN Clear	Standard	20	110	2.1/2.6	565	30°	

T1 (3mm) 5V Integrated Resistor (Diffused) LEDs

See Above	PC120TR3-5V	PC120TR3-5V-140	HE RED	RED Diffused	Standard	20	4	5V	635	30°	1
	PC120TY3-5V	PC120TY3-5V-140	YELLOW	YEL Diffused	Standard	20	4	5V	585	30°	
	PC120TG3-5V	PC120TG3-5V-140	HE GREEN	GRN Diffused	Standard	20	3.5	5V	565	30°	

T1 (3mm) Sunlight-Visible (Water-Clear) LEDs

	PC120-OUR	PC120-OUR-140	ULTRA RED	Water-Clear	Standard	20	800	2.0/2.6	660	30°	1
	PC120-OUO	PC120-OUO-140	ORANGE	Water-Clear	Standard	20	600	2.0/2.6	620	30°	
	PC120-OUY	PC120-OUY-140	YELLOW	Water-Clear	Standard	20	700	2.0/2.6	595	30°	
	PC120-1CW	PC120-1CW-140	COOL WHITE	Water-Clear	Standard	20	250	3.6/4.0	8000K	30°	
	PC120-UG	PC120-UG-140	LIME GREEN	Water-Clear	Standard	20	600	2.0/2.6	570	30°	
	PC120-1AG	PC120-1AG-140	AQUA GREEN	Water-Clear	Standard	20	600	3.5/4.0	525	30°	
	PC120-1PB	PC120-1PB-140	PURE BLUE	Water-Clear	Standard	20	400	3.6/4.0	470	30°	

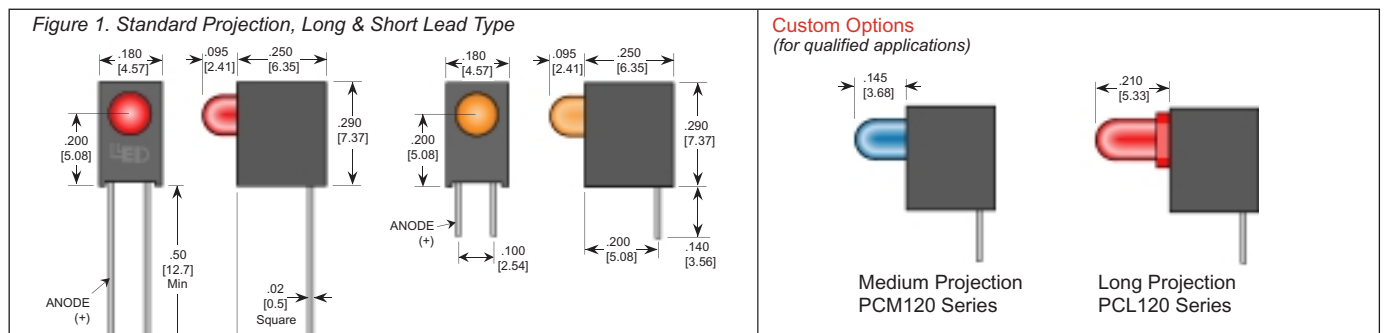
T1 (3mm) 2mA High-Efficiency (Water-Clear) LEDs

See Above	PC120CWR5N	PC120CWR5N-140	HE RED	Water-Clear	Standard	20	100	2.0/2.6	635	30°	1
	PC120CWY5N	PC120CWY5N-140	YELLOW	Water-Clear	Standard	20	90	2.1/2.6	585	30°	
	PC120CWG5N	PC120CWG5N-140	HE GREEN	Water-Clear	Standard	20	110	2.1/2.6	568	30°	

T1 (3mm) Bicolor (Diffused) LEDs, 2-Leaded

See Above	PC120TWRG4B	PC120TWRG4B-140	HE RED	WHT Diffused	Standard	20	30	2.0/2.6	630	50°	1
			HE GREEN			20	30	2.2/2.6	568	50°	
	PC120TWYG4B	PC120TWYG4B-140	YELLOW	WHT Diffused	Standard	20	15	2.1/2.6	585	50°	
			HE GREEN			20	30	2.2/2.8	568	50°	

Custom Options: OEM large quantity requirements





T1 (3mm) Right-Angled PCB LEDs, 0.125" Centerline

Part Number		Emitted Color	Lens Color/ Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
Long Lead (0.500" Min.)	Short Lead (0.140")				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1 (3mm) High-Efficiency (Diffused) LEDs

	PC110TR6	PC110TR6-140	ULTRA RED	RED Diffused	—	20	100	1.7/2.6	660	45°	1
	PC110TR4 (5)	PC110TR4-140	HE RED	RED Diffused	—	20	24	2.0/2.8	635	45°	
	PC110TR1	PC110TR1-140	RED	RED Diffused	—	20	3	1.7/2.0	665	45°	
	PC110TO4 (5)	PC110TO4-140	ORANGE	ORN Diffused	—	20	30	2.1/2.8	610	45°	
	PC110TY4 (5)	PC110TY4-140	YELLOW	YEL Diffused	—	20	22	2.1/2.8	585	45°	
	PC110TG4 (5)	PC110TG4-140	HE GREEN	GRN Diffused	—	20	18	2.1/2.8	565	45°	
	PC110TUB5	PC110TUB5-140	ULTRA BLUE	BLU Diffused	—	20	2.4	3.8/5.0	430	45°	

T1 (3mm) Sunlight-Visible (Diffused) LEDs

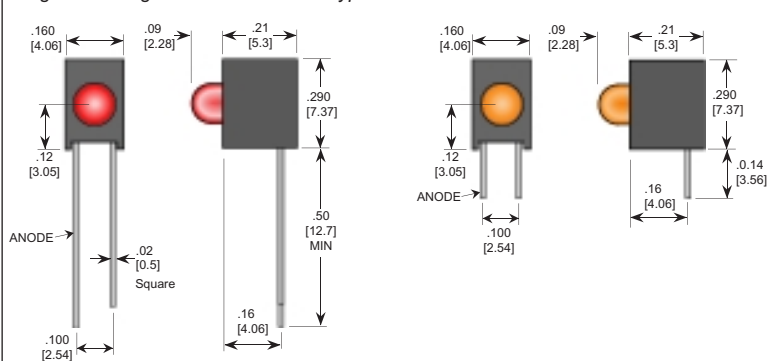
	PC110T-0UR	PC110T-0UR-140	ULTRA RED	RED Diffused	—	20	700	2.0/2.6	660	45°	1
	PC110T-0UO	PC110T-0UO-140	ORANGE	ORN Diffused	—	20	1000	2.0/2.6	610	45°	
	PC110T-0UY	PC110T-0UY-140	YELLOW	YEL Diffused	—	20	480	2.0/2.6	592	45°	
	PC110T-0UG	PC110T-0UG-140	LIME GREEN	GRN Diffused	—	20	300	2.0/2.6	570	45°	
	PC110T-1AG	PC110T-1AG-140	AQUA GREEN	GRN Diffused	—	20	300	3.5/4.0	523	45°	
	PC110T-1PB	PC110T-1PB-140	PURE BLUE	BLU Diffused	—	20	120	3.6/4.0	470	45°	

T1 (3mm) Bicolor (Diffused) LEDs, 2-Leaded

	PC110TWRG4B	PC110TWRG4B-140	HE RED	WHT Diffused	—	20	30	2.0/2.6	630	50°	1
			HE GREEN			20	30	2.2/2.6	568	50°	
	PC110TWYG4B	PC110TWYG4B-140	YELLOW	WHT Diffused	—	20	15	2.1/2.6	585	50°	
			HE GREEN			20	30	2.2/2.8	568	50°	

Custom Options: OEM large quantity requirements

Figure 1. Long Lead & Short Lead Type





T1 (3mm) Right-Angled Bi-Level PCB LEDs

Part Number		Emitted Color	Lens Color/Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
Long Lead (0.500" Min.)	Short Lead (0.140")				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1 (3mm) Bi-Level, Same or Mix Color, High-Efficiency (Diffused) LEDs

Same Color Mix Color (See Fig. 1 Part Number Example)	21PCT170TR6	21PCT170TR6-140	ULTRA RED	RED Diffused	Standard	20	150	1.7/2.6	660	45°	1
	21PCT170TR4 (5)	21PCT170TR4-140	HE RED	RED Diffused	Standard	20	30	2.0/2.8	635	45°	
	21PCT170TO4 (5)	21PCT170TO4-140	ORANGE	ORN Diffused	Standard	20	14	2.1/2.8	610	45°	
	21PCT170TY4 (5)	21PCT170TY4-140	YELLOW	YEL Diffused	Standard	20	24	2.1/2.8	585	45°	
	21PCT170TG4 (5)	21PCT170TG4-140	HE GREEN	GRN Diffused	Standard	20	12	2.1/2.8	565	45°	
	21PCT170TUB5	21PCT170TUB5-140	ULTRA BLUE	BLU Diffused	Standard	20	30	3.8/5.0	430	45°	

T1 (3mm) Bi-Level, Same or Mix Color, Sunlight-Visible (Diffused) LEDs

Same Color Mix Color (See Fig. 1 Part Number Example)	21PCT170T-0UR	21PCT170T-0R-140	ULTRA RED	RED Diffused	Standard	20	700	2.0/2.6	660	45°	1
	21PCT170T-0UO	21PCT170T-0O-140	ORANGE	ORN Diffused	Standard	20	1000	2.0/2.6	610	45°	
	21PCT170T-0UY	21PCT170T-0Y-140	YELLOW	YEL Diffused	Standard	20	480	2.0/2.6	592	45°	
	21PCT170T-0UG	21PCT170T-0G-140	LIME GREEN	GRN Diffused	Standard	20	300	2.0/2.6	570	45°	
	21PCT170T-1AG	21PCT170T-1AG-140	AQUA GREEN	GRN Diffused	Standard	20	300	3.5/4.0	523	45°	
	21PCT170T-1PB	21PCT170T-1PB-140	PURE BLUE	BLU Diffused	Standard	20	120	3.6/4.0	470	45°	

T1 (3mm) Bi-Level, Same or Mix Color, 2mA Low-Current (Diffused) LEDs

See above	21PCT170TR5N-LC	21PCT170TR5N-140/LC	HE RED	RED Diffused	Standard	2	2.2	1.8/2.2	635	45°	1
	21PCT170TY5N-LC	21PCT170TY5N-140/LC	YELLOW	YEL Diffused	Standard	2	2.3	1.9/2.7	585	45°	
	21PCT170TG5N-LC	21PCT170TG5N-140/LC	HE GREEN	GRN Diffused	Standard	2	2.2	1.8/2.2	568	45°	

T1 (3mm) Bi-Level, Same or Mix Color, High-Efficiency (Tinted-Clear) LEDs

See above	21PCT170CR5N	21PCT170CR4-140	HE RED	RED Clear	Standard	20	100	2.0/2.6	635	30°	1
	21PCT170CY5N	21PCT170Y4-140	YELLOW	YEL Clear	Standard	20	90	2.1/2.6	585	30°	
	21PCT170CG5N	21PCT170CG4-140	HE GREEN	GRN Clear	Standard	20	110	2.1/2.6	565	30°	

T1 (3mm) Bi-Level, Same or Mix Color, 5V Integrated Resistor (Diffused) LEDs

See above	21PCT170TR3-5V	21PCT170TR3-5V-140	HE RED	RED Diffused	Standard	20	4	5V	635	30°	1
	21PCT170TY3-5V	21PCT170TY3-5V-140	YELLOW	YEL Diffused	Standard	20	4	5V	585	30°	
	21PCT170TG3-5V	21PCT170TG3-5V-140	HE GREEN	GRN Diffused	Standard	20	3.5	5V	565	30°	

T1 (3mm) Bi-Level, Same or Mix Color, Sunlight-Visible (Water-Clear) LEDs

Same Color Mix Color (See Fig. 1 Part Number Example)	21PCT170-0UR	21PCT170CW-0R-140	ULTRA RED	Water-Clear	Standard	20	800	2.0/2.6	660	30°	1
	21PCT170-0UO	21PCT170CW-0O-140	ORANGE	Water-Clear	Standard	20	600	2.0/2.6	620	30°	
	21PCT170-0UY	21PCT170CW-0Y-140	YELLOW	Water-Clear	Standard	20	700	2.0/2.6	595	30°	
	21PCT170-1CW	21PCT170CW-1CW-140	COOL WHITE	Water-Clear	Standard	20	250	3.6/4.0	592	30°	
	21PCT170-0UG	21PCT170CW-0G-140	LIME GREEN	Water-Clear	Standard	20	600	2.0/2.6	570	30°	
	21PCT170-1AG	21PCT170CW-1AG-140	AQUA GREEN	Water-Clear	Standard	20	600	3.5/4.0	525	30°	
	21PCT170-1PB	21PCT170CW-1PB-140	PURE BLUE	Water-Clear	Standard	20	400	3.6/4.0	470	30°	

T1 (3mm) Bi-Level, Same or Mix Color, High-Efficiency (Water-Clear) LEDs

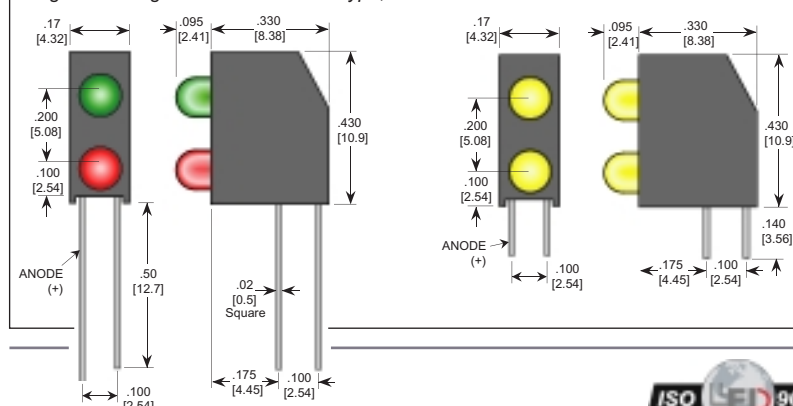
See above	21PCT170CWR5N	21PCT170CWR5N-140	HE RED	Water-Clear	Standard	20	100	2.0/2.6	635	30°	1
	21PCT170CWY5N	21PCT170CWY5N-140	YELLOW	Water-Clear	Standard	20	90	2.1/2.6	585	30°	
	21PCT170CWG5N	21PCT170CWG5N-140	HE GREEN	Water-Clear	Standard	20	110	2.1/2.6	568	30°	

T1 (3mm) Bi-Level, Same or Mix Color, Bicolor (Diffused) LEDs, 2-Leaded

See above	21PCT170TWRG4B	21PCT170TWRG4B-140	HE RED	WHT Diffused	Standard	20	30	2.0/2.6	630	50°	1
			HE GREEN	WHT Diffused	Standard	20	30	2.2/2.6	568	50°	
	21PCT170TWYG4B	21PCT170TWYG4B-140	YELLOW	WHT Diffused	Standard	20	15	2.1/2.6	585	50°	
			HE GREEN	WHT Diffused	Standard	20	30	2.2/2.8	568	50°	

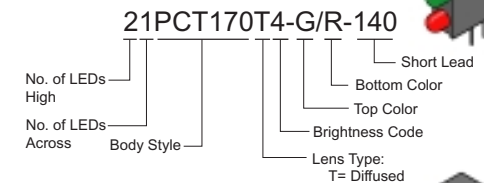
Custom Options: OEM large quantity requirements

Figure 1. Long Lead & Short Lead Type, Bi-Level LEDs



Part Number Example: Mix Color

21PCT170T4-G/R (Green top, Red bottom)



Part Number Example: 1 Blank Space

21PCT170T4-G/x (Green top, Blank bottom)

T1 (3mm) Right-Angled Bi-Level PCB LEDs

Part Number		Emitted Color	Lens Color/ Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
Long Lead (0.500" Min.)	Short Lead (0.140")				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1 (3mm) Bi-Level, Same or Mix Color, High-Efficiency (Diffused) LEDs

[illegible]

T1 (3mm) Bi-Level, Same or Mix Color, Sunlight-Visible (Diffused) LEDs

 Same Color	 Mix Color (See Fig.1 Part Number Example)	21PCT120T-0UR	21PCT120T-0R-140	ULTRA RED		RED Diffused	Standard	20	700	2.0/2.6	660	45°
		21PCT120T-0UO	21PCT120T-0O-140	ORANGE		ORN Diffused	Standard	20	1000	2.0/2.6	610	45°
		21PCT120T-0UY	21PCT120T-0Y-140	YELLOW		YEL Diffused	Standard	20	480	2.0/2.6	592	45°
		21PCT120T-0UG	21PCT120T-0G-140	LIME GREEN		GRN Diffused	Standard	20	300	2.0/2.6	570	45°
		21PCT120T-1AG	21PCT120T-1AG-140	AQUA GREEN		GRN Diffused	Standard	20	300	3.5/4.0	523	45°
		21PCT120T-1PB	21PCT120T-1PB-140	PURE BLUE		BLU Diffused	Standard	20	120	3.6/4.0	470	45°

T1 (3mm) Bi-Level, Same or Mix Color, 2mA Low Current (Diffused) LEDs

See above	21PCT120TR5N-LC	21PCT120TR5N-140/LC	HE RED		RED Diffused	Standard	2	2.2	1.8/2.2	635	45°	1
	21PCT120TY5N-LC	21PCT120TY5N-140/LC	YELLOW		YEL Diffused	Standard	2	2.3	1.9/2.7	585	45°	
	21PCT120TG5N-LC	21PCT120TG5N-140/LC	HE GREEN		GRN Diffused	Standard	2	2.2	1.8/2.2	568	45°	

T1 (3mm) Bi-Level, Same or Mix Color, High-Efficiency (Tinted-Clear) LEDs

See above	21PCT120CR5N	21PCT120CR4-140	HE RED		RED Clear	Standard	20	100	2.0/2.6	635	30°	1
	21PCT120CY5N	21PCT120Y4-140	YELLOW		YEL Clear	Standard	20	90	2.1/2.6	585	30°	
	21PCT120CG5N	21PCT120CG4-140	HE GREEN		GRN Clear	Standard	20	110	2.1/2.6	565	30°	

T1 (3mm) Bi-Level, Same or Mix Color, 5V Integrated Resistor (Diffused) LEDs

See above	21PCT120TR3-5V	21PCT120TR3-5V-140	HE RED		RED Diffused	Standard	20	4	5V	635	30°	1
	21PCT120TY3-5V	21PCT120TY3-5V-140	YELLOW		YEL Diffused	Standard	20	4	5V	585	30°	
	21PCT120TG3-5V	21PCT120TG3-5V-140	HE GREEN		GRN Diffused	Standard	20	3.5	5V	565	30°	

T1 (3mm) Bi-Level, Same or Mix Color, Sunlight-Visible (Water-Clear) LEDs

 Same Color	 Mix Color (See Fig. 1 Part Number Example)	21PCT120-0UR	21PCT120CW-0R-140	ULTRA RED		Water-Clear	Standard	20	800	2.0/2.6	660	30°	1
		21PCT120-0UO	21PCT120CW-0O-140	ORANGE		Water-Clear	Standard	20	600	2.0/2.6	620	30°	
		21PCT120-0UY	21PCT120CW-0Y-140	YELLOW		Water-Clear	Standard	20	700	2.0/2.6	595	30°	
		21PCT120-1CW	21PCT120CW-1CW-140	COOL WHITE		Water-Clear	Standard	20	250	3.6/4.0	592	30°	
		21PCT120-0UG	21PCT120CW-0G-140	LIME GRN		Water-Clear	Standard	20	600	2.0/2.6	570	30°	
		21PCT120-1AG	21PCT120CW-1AG-140	AQUA GREEN		Water-Clear	Standard	20	600	3.5/4.0	525	30°	
		21PCT120-1PB	21PCT120CW-1PB-140	PURE BLUE		Water-Clear	Standard	20	400	3.6/4.0	470	30°	

T1 (3mm) Bi-Level, Same or Mix Color, High-Efficiency (Water-Clear) LEDs

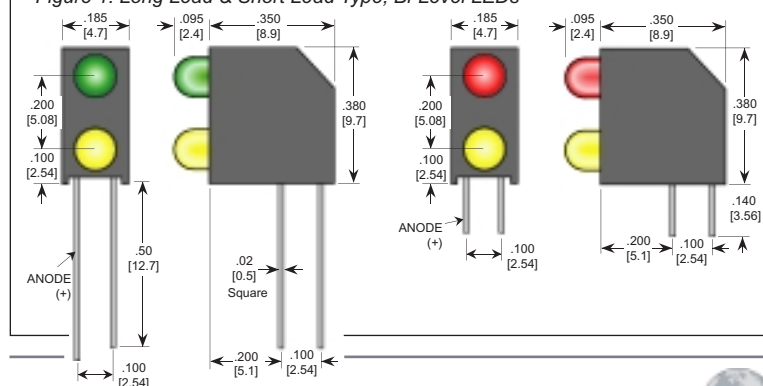
See above	21PCT120CWR5N	21PCT120CWR5N-140	HE RED		Water-Clear	Standard	20	100	2.0/2.6	635	30°	1
	21PCT120CWY5N	21PCT120CWY5N-140	YELLOW		Water-Clear	Standard	20	90	2.1/2.6	585	30°	
	21PCT120CWG5N	21PCT120CWG5N-140	HE GREEN		Water-Clear	Standard	20	110	2.1/2.6	568	30°	

T1 (3mm) Bi-Level, Same or Mix Color, Bicolor (Diffused) LEDs, 2-Leaded

See above	21PCT120TWRG4B	21PCT120TWRG4B-140	HE RED 	WHT Diffused	Standard	20	30	2.0/2.6	630	50°	1
			HE GREEN 		Standard	20	30	2.2/2.6	568	50°	
	21PCT120TWYG4B	21PCT120TWYG4B-140	YELLOW 	WHT Diffused	Standard	20	15	2.1/2.6	585	50°	
			HE GREEN 		Standard	20	30	2.2/2.8	568	50°	

Custom Options: OEM large quantity requirements

Figure 1. Long Lead & Short Lead Type, Bi-Level LEDs



Part Number Example: Mix Color
21PCT120T4-G/Y (Green top, Yellow bottom)

21PCT120T4-G/Y-140

No. of LEDs High

No. of LEDs Across

Body Style

Short Lead

Bottom Color

Top Color

Brightness Code

Lens Type:
T= Diffused

Part Number Example: 1 Blank Space
21PCT120T4-G/x (Green top, Blank bottom)

T1 (3mm) Right-Angled Tri-Level PCB LEDs

Part Number	Emitted Color	Lens Color/Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
				I _F (mA)	I _V (mcd) typ	V _F (V) typ/max	λ _p (nm)		

T1 (3mm) Tri-Level, Same or Mix Color, High-Efficiency (Diffused) LEDs

Mix Color (See Fig.1 Part Number Example)	31PCT170TR6	ULTRA RED	RED Diffused	Standard	20	150	1.7/2.6	660	45°	1
	31PCT170TR4 (5)	HE RED	RED Diffused	Standard	20	30	2.0/2.8	635	45°	
	31PCT170TO4 (5)	ORANGE	ORN Diffused	Standard	20	14	2.1/2.8	610	45°	
	31PCT170TY4 (5)	YELLOW	YEL Diffused	Standard	20	24	2.1/2.8	585	45°	
	31PCT170TG4 (5)	HE GREEN	GRN Diffused	Standard	20	12	2.1/2.8	565	45°	
	31PCT170TUB5	ULTRA BLUE	BLU Diffused	Standard	20	30	3.8/5.0	430	45°	

T1 (3mm) Tri-Level, Same or Mix Color, Sunlight-Visible (Diffused) LEDs

Mix Color (See Fig.1 Part Number Example)	31PCT170T-0UR	ULTRA RED	RED Diffused	Standard	20	700	2.0/2.6	660	45°	1
	31PCT170T-0UO	ORANGE	ORN Diffused	Standard	20	1000	2.0/2.6	610	45°	
	31PCT170T-0UY	YELLOW	YEL Diffused	Standard	20	480	2.0/2.6	592	45°	
	31PCT170T-0UG	LIME GREEN	GRN Diffused	Standard	20	300	2.0/2.6	570	45°	
	31PCT170T-1AG	AQUA GREEN	GRN Diffused	Standard	20	300	3.5/4.0	523	45°	
	31PCT170T-1PB	PURE BLUE	BLU Diffused	Standard	20	120	3.6/4.0	470	45°	

T1 (3mm) Tri-Level, Same or Mix Color, 2mA Low Current (Diffused) LEDs

See above	31PCT170TR5N-LC	HE RED	RED Diffused	Standard	2	2.2	1.8/2.2	635	45°	1
	31PCT170TY5N-LC	YELLOW	YEL Diffused	Standard	2	2.3	1.9/2.7	585	45°	
	31PCT170TG5N-LC	HE GREEN	GRN Diffused	Standard	2	2.2	1.8/2.2	568	45°	

T1 (3mm) Tri-Level, Same or Mix Color, High-Efficiency (Tinted-Clear) LEDs

See above	31PCT170CR5N	HE RED	RED Clear	Standard	20	100	2.0/2.6	635	30°	1
	31PCT170CY5N	YELLOW	YEL Clear	Standard	20	90	2.1/2.6	585	30°	
	31PCT170CG5N	HE GREEN	GRN Clear	Standard	20	110	2.1/2.6	565	30°	

T1 (3mm) Tri-Level, Same or Mix Color, 5V Integrated Resistor (Diffused) LEDs

See above	31PCT170TR3-5V	HE RED	RED Diffused	Standard	20	4	5V	635	30°	1
	31PCT170TY3-5V	YELLOW	YEL Diffused	Standard	20	4	5V	585	30°	
	31PCT170TG3-5V	HE GREEN	GRN Diffused	Standard	20	3.5	5V	565	30°	

T1 (3mm) Tri-Level, Same or Mix Color, Sunlight-Visible (Water-Clear) LEDs

Mix Color (See Fig.1 Part Number Example)	31PCT170-0UR	ULTRA RED	Water-Clear	Standard	20	800	2.0/2.6	660	30°	1
	31PCT170-0UO	ORANGE	Water-Clear	Standard	20	600	2.0/2.6	620	30°	
	31PCT170-0UY	YELLOW	Water-Clear	Standard	20	700	2.0/2.6	595	30°	
	31PCT170-1CW	COOL WHITE	Water-Clear	Standard	20	250	3.6/4.0	592	30°	
	31PCT170-0UG	LIME GREEN	Water-Clear	Standard	20	600	2.0/2.6	570	30°	
	31PCT170-1AG	AQUA GREEN	Water-Clear	Standard	20	600	3.5/4.0	525	30°	
	31PCT170-1PB	PURE BLUE	Water-Clear	Standard	20	400	3.6/4.0	470	30°	

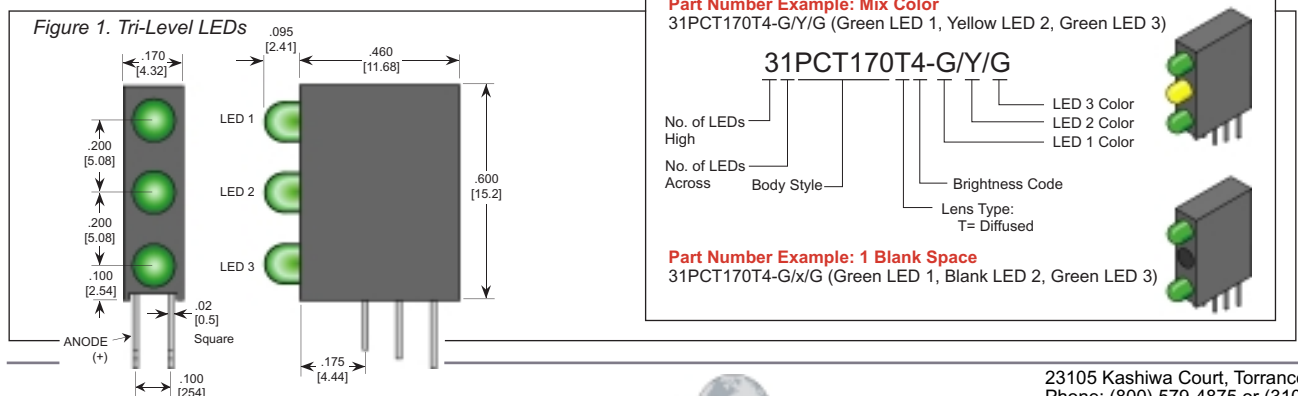
T1 (3mm) Tri-Level, Same or Mix Color, High-Efficiency (Water-Clear) LEDs

See above	31PCT170CWR5N	HE RED	Water-Clear	Standard	20	100	2.0/2.6	635	30°	1
	31PCT170CWY5N	YELLOW	Water-Clear	Standard	20	90	2.1/2.6	585	30°	
	31PCT170CWG5N	HE GREEN	Water-Clear	Standard	20	110	2.1/2.6	568	30°	

T1 (3mm) Tri-Level, Same or Mix Color, Bicolor (Diffused) LEDs, 2-Leaded

See above	31PCT170TWRG4B	HE RED	WHT Diffused	Standard	20	30	2.0/2.6	630	50°	1
		HE GREEN	WHT Diffused	Standard	20	30	2.2/2.6	568	50°	
	31PCT170TWYG4B	YELLOW	WHT Diffused	Standard	20	15	2.1/2.6	585	50°	
		HE GREEN	WHT Diffused	Standard	20	30	2.2/2.8	568	50°	

Custom Options: OEM large quantity requirements



T1 (3mm) Right-Angled Quad-Level PCB LEDs

Part Number	Emitted Color	Lens Color/Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1 (3mm) Quad-Level, Same or Mix Color, High-Efficiency (Diffused) LEDs

	41PCT170TR6	ULTRA RED	RED Diffused	Standard	20	150	1.7/2.6	660	45°	1
	41PCT170TR4 (5)	HE RED	RED Diffused	Standard	20	30	2.0/2.8	635	45°	
	41PCT170TO4 (5)	ORANGE	ORN Diffused	Standard	20	14	2.1/2.8	610	45°	
	41PCT170TY4 (5)	YELLOW	YEL Diffused	Standard	20	24	2.1/2.8	585	45°	
	41PCT170TG4 (5)	HE GREEN	GRN Diffused	Standard	20	12	2.1/2.8	565	45°	
	41PCT170TUB5	ULTRA BLUE	BLU Diffused	Standard	20	30	3.8/5.0	430	45°	

T1 (3mm) Quad-Level, Same or Mix Color, Sunlight-Visible (Diffused) LEDs

	41PCT170T-OUR	ULTRA RED	RED Diffused	Standard	20	700	2.0/2.6	660	45°	1
	41PCT170T-UOU	ORANGE	ORN Diffused	Standard	20	1000	2.0/2.6	610	45°	
	41PCT170T-UUY	YELLOW	YEL Diffused	Standard	20	480	2.0/2.6	592	45°	
	41PCT170T-UG	LIME GREEN	GRN Diffused	Standard	20	300	2.0/2.6	570	45°	
	41PCT170T-1AG	AQUA GREEN	GRN Diffused	Standard	20	300	3.5/4.0	523	45°	
	41PCT170T-1PB	PURE BLUE	BLU Diffused	Standard	20	120	3.6/4.0	470	45°	

T1 (3mm) Quad-Level, Same or Mix Color, 2mA Low Current (Diffused) LEDs

See above	41PCT170TR5N-LC	HE RED	RED Diffused	Standard	2	2.2	1.8/2.2	635	45°	1
	41PCT170TY5N-LC	YELLOW	YEL Diffused	Standard	2	2.3	1.9/2.7	585	45°	
	41PCT170TG5N-LC	HE GREEN	GRN Diffused	Standard	2	2.2	1.8/2.2	568	45°	

T1 (3mm) Quad-Level, Same or Mix Color, High-Efficiency (Tinted-Clear) LEDs

See above	41PCT170CR5N	HE RED	RED Clear	Standard	20	100	2.0/2.6	635	30°	1
	41PCT170CY5N	YELLOW	YEL Clear	Standard	20	90	2.1/2.6	585	30°	
	41PCT170CG5N	HE GREEN	GRN Clear	Standard	20	110	2.1/2.6	565	30°	

T1 (3mm) Quad-Level, Same or Mix Color, 5V Integrated Resistor (Diffused) LEDs

See above	41PCT170TR3-5V	HE RED	RED Diffused	Standard	20	4	5V	635	30°	1
	41PCT170TY3-5V	YELLOW	YEL Diffused	Standard	20	4	5V	585	30°	
	41PCT170TG3-5V	HE GREEN	GRN Diffused	Standard	20	3.5	5V	565	30°	

T1 (3mm) Quad-Level, Same or Mix Color, Sunlight-Visible (Water-Clear) LEDs

	41PCT170-OUR	ULTRA RED	Water-Clear	Standard	20	800	2.0/2.6	660	30°	1
	41PCT170-UOU	ORANGE	Water-Clear	Standard	20	600	2.0/2.6	620	30°	
	41PCT170-UUY	YELLOW	Water-Clear	Standard	20	700	2.0/2.6	595	30°	
	41PCT170-1CW	COOL WHITE	Water-Clear	Standard	20	250	3.6/4.0	592	30°	
	41PCT170-UG	LIME GREEN	Water-Clear	Standard	20	600	2.0/2.6	570	30°	
	41PCT170-1AG	AQUA GREEN	Water-Clear	Standard	20	600	3.5/4.0	525	30°	
	41PCT170-1PB	PURE BLUE	Water-Clear	Standard	20	400	3.6/4.0	470	30°	

T1 (3mm) Quad-Level, Same or Mix Color, High-Efficiency (Water-Clear) LEDs

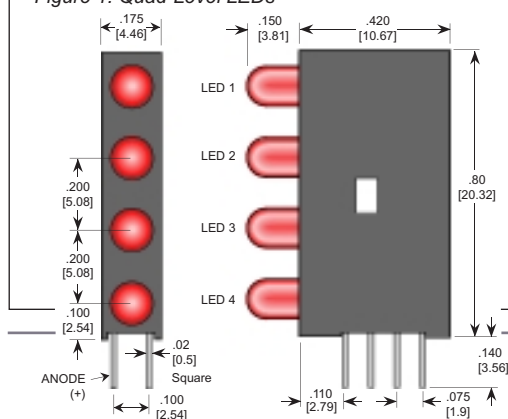
See above	41PCT170CWR5N	HE RED	Water-Clear	Standard	20	100	2.0/2.6	635	30 _i	1
	41PCT170CWY5N	YELLOW	Water-Clear	Standard	20	90	2.1/2.6	585	30 _i	
	41PCT170CWG5N	HE GREEN	Water-Clear	Standard	20	110	2.1/2.6	568	30 _i	

T1 (3mm) Quad-Level, Same or Mix Color, Bicolor (Diffused) LEDs, 2-Leaded

See above	41PCT170TWRG4B	HE RED	WHT Diffused	Standard	20	30	2.0/2.6	630	50°	1
		HE GREEN	WHT Diffused	Standard	20	30	2.2/2.6	568	50°	
	41PCT170TWYG4B	YELLOW	WHT Diffused	Standard	20	15	2.1/2.6	585	50°	
		HE GREEN	WHT Diffused	Standard	20	30	2.2/2.8	568	50°	

Custom Options: OEM large quantity requirements

Figure 1. Quad-Level LEDs



Part Number Example: Mix Color
41PCT170T4-G/Y/G/Y (Green LED 1, Yellow LED 2, Green LED 3, Yellow LED 4)

41PCT170T4-G/Y/G/Y

No. of LEDs High
No. of LEDs Across
Body Style
Brightness Code
Lens Type: T= Diffused

Part Number Example: 1 Blank Space
41PCT170T4-G/x/G/Y (Green LED 1, Blank LED 2, Green LED 3, Yellow LED 4)



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E-mail: webmaster@ledtronics.com
Website: www.ledtronics.com

Part Number	Emitted Color	Lens Color/Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1 (3mm) High-Efficiency (Diffused) LEDs

	14PC110TR6-140	ULTRA RED	RED Diffused	—	20	100	1.7/2.6	660	45°	1
	14PC110TR4-140	HE RED	RED Diffused	—	20	24	2.0/2.8	635	45°	
	14PC110TR1-140	RED	RED Diffused	—	20	3	1.7/2.0	665	45°	
	14PC110TO4-140	ORANGE	ORN Diffused	—	20	30	2.1/2.8	610	45°	
	14PC110TY4-140	YELLOW	YEL Diffused	—	20	22	2.1/2.8	585	45°	
	14PC110TG4-140	HE GREEN	GRN Diffused	—	20	18	2.1/2.8	565	45°	
	14PC110TUB5-140	ULTRA BLUE	BLU Diffused	—	20	2.4	3.8/5.0	430	45°	

T1 (3mm) High-Efficiency (Diffused) LEDs

	14PC120TR6-140	ULTRA RED	RED Diffused	—	20	100	1.7/2.6	660	45°	2
	14PC120TR4-140	HE RED	RED Diffused	—	20	24	2.0/2.8	635	45°	
	14PC120TR1-140	RED	RED Diffused	—	20	3	1.7/2.0	665	45°	
	14PC120TO4-140	ORANGE	ORN Diffused	—	20	30	2.1/2.8	610	45°	
	14PC120TY4-140	YELLOW	YEL Diffused	—	20	22	2.1/2.8	585	45°	
	14PC120TG4-140	HE GREEN	GRN Diffused	—	20	18	2.1/2.8	565	45°	
	14PC120TUB5-140	ULTRA BLUE	BLU Diffused	—	20	2.4	3.8/5.0	430	45°	

Custom Options: OEM large quantity requirements

Part Number Ordering Code for All Lead, Same Color:

14PC110TY5N

No. of LEDs High	No. of LEDs Wide	Body Style	Lens Type	Brightness Code	LED Color
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Part Number Ordering Code for Mix Color:

14PC120T5N-xxxx

No. of LEDs High	No. of LEDs Wide	Body Style	Lens Type	Brightness Code	LED Color (right)	LED Color (center)	LED Color (left)
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Figure 1. Right-Angle Arrays

Custom Options
(for qualified applications)

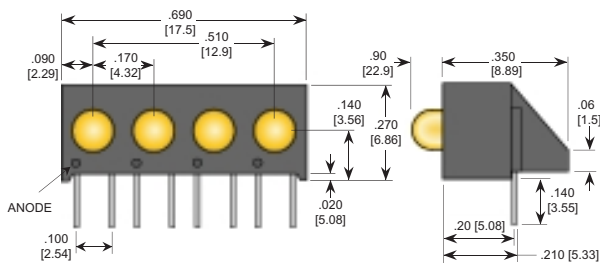
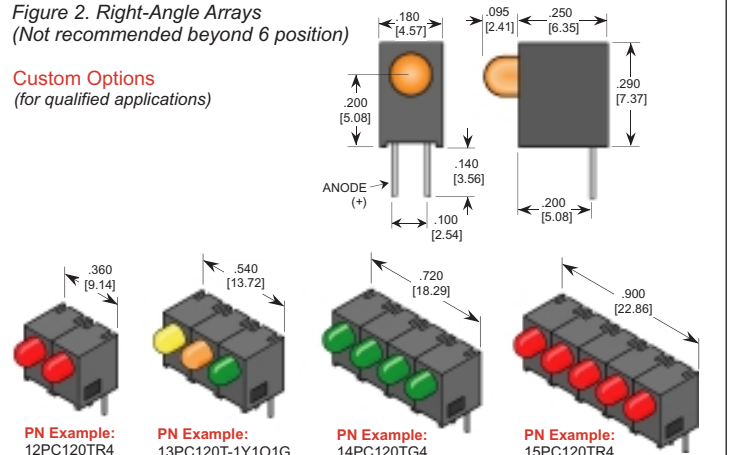


Figure 2. Right-Angle Arrays
(Not recommended beyond 6 position)

Custom Options
(for qualified applications)



Part Number	Emitted Color	Lens Color/Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1 (3mm) High-Efficiency (Diffused) LEDs

	PC145TR6	ULTRA RED	RED Diffused	—	20	100	1.7/2.6	660	45°	1
	PC145TR5	HE RED	RED Diffused	—	20	24	2.0/2.8	635	45°	
	PC145TR1	STD RED	RED Diffused	—	20	3	1.7/2.0	665	45°	
	PC145TO5	ORANGE	ORN Diffused	—	20	30	2.1/2.8	610	45°	
	PC145TY5	YELLOW	YEL Diffused	—	20	22	2.1/2.8	585	45°	
	PC145TG5	HE GREEN	GRN Diffused	—	20	18	2.1/2.8	565	45°	
	PC145TUB5	ULTRA BLUE	BLU Diffused	—	20	2.4	3.8/5.0	430	45°	

T1 (3mm) Sunlight Visible (Diffused) LEDs

	PC145T-0UR	ULTRA RED	RED Diffused	—	20	700	2.0/2.6	660	45°	1
	PC145T-0UO	ORANGE	ORN Diffused	—	20	1000	2.0/2.6	610	45°	
	PC145T-0UY	YELLOW	YEL Diffused	—	20	480	2.0/2.6	592	45°	
	PC145T-0UG	LIME GREEN	GRN Diffused	—	20	300	2.0/2.6	570	45°	
	PC145T-1AG	AQUA GREEN	GRN Diffused	—	20	300	3.5/4.0	523	45°	
	PC145T-1PB	PURE BLUE	BLU Diffused	—	20	120	3.6/4.0	470	45°	

T1 (3mm) 2mA Low Current (Diffused) LEDs

See Above	PC145TR5N-LC	HE RED	RED Diffused	—	2	2.2	1.8/2.2	635	45°	1
	PC145TY5N-LC	YELLOW	YEL Diffused	—	2	2.3	1.9/2.7	585	45°	
	PC145TG5N-LC	HE GREEN	GRN Diffused	—	2	2.2	1.8/2.2	568	45°	

T1 (3mm) High-Efficiency (Tinted) LEDs

See Above	PC145CR5	HE RED	RED Clear	—	20	100	2.0/2.6	635	30°	1
	PC145CY5	YELLOW	YEL Clear	—	20	90	2.1/2.6	585	30°	
	PC145CG5	HE GREEN	GRN Clear	—	20	110	2.1/2.6	565	30°	

T1 (3mm) 5V Integrated Resistor (Diffused) LEDs

See Above	PC145TR3-5V	HE RED	RED Diffused	—	20	4	5V	635	30°	1
	PC145TY3-5V	YELLOW	YEL Diffused	—	20	4	5V	585	30°	
	PC145TG3-5V	HE GREEN	GRN Diffused	—	20	3.5	5V	565	30°	

T1 (3mm) Sunlight Visible (Water-Clear) LEDs

	PC145CW-0UR	ULTRA RED	Water-Clear	—	20	800	2.0/2.6	660	30°	1
	PC145CW-0UO	ORANGE	Water-Clear	—	20	600	2.0/2.6	620	30°	
	PC145CW-0UY	YELLOW	Water-Clear	—	20	700	2.0/2.6	595	30°	
	PC145CW-1CW	COOL WHITE	Water-Clear	—	20	250	3.6/4.0	8000K	30°	
	PC145CW-0UG	LIME GREEN	Water-Clear	—	20	600	2.0/2.6	570	30°	
	PC145CW-1AG	AQUA GREEN	Water-Clear	—	20	600	3.5/4.0	525	30°	
	PC145CW-1PB	PURE BLUE	Water-Clear	—	20	400	3.6/4.0	470	30°	

T1 (3mm) 2mA High-Efficiency (Water-Clear) LEDs

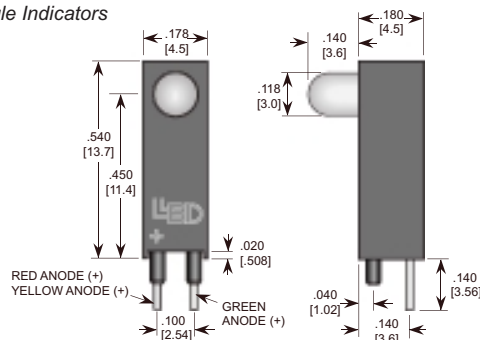
See Above	PC145CWR5N	HE RED	Water-Clear	—	20	100	2.0/2.6	635	30°	1
	PC145CWY5N	YELLOW	Water-Clear	—	20	90	2.1/2.6	585	30°	
	PC145CWG5N	HE GREEN	Water-Clear	—	20	110	2.1/2.6	568	30°	

T1 (3mm) Bicolor (Diffused) LEDs, 2-Leaded

See Above	PC145TWRG4B	HE RED	WHT Diffused	—	20	30	2.0/2.6	630	50°	1
		HE GREEN			20	30	2.2/2.6	568	50°	
	PC145TWYG4B	YELLOW	WHT Diffused	—	20	15	2.1/2.6	585	50°	
		HE GREEN			20	30	2.2/2.8	568	50°	

Custom Options: OEM large quantity requirements

Figure 1. Right-Angle Indicators



Log # 125K pg1 Rev 07-2001

Features

- Extended housing eliminates bleed
- Housing material meets UL94V-0
- Narrow viewing angle
- Fast turn on/off time I.C. compatible
- Available in standard and special colors
- Diffused lens standard Clear illuminator optional
- Solid-State, high shock/vibration resistant
- Single color or Bicolor configurations
- LED Operating Life: 100,000+ hours (10+ years)

Custom Options

(for qualified applications)

- Sunlight Visible Ultrabrights
- Low current (2mA) LEDs
- Special colors: Orange, Cool White, Pure Green
- Infrareds 840nm, 880nm, 940nm

Part Number	Emitted Color	Lens Color/Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1 (3mm) Single-level Indicator LEDs

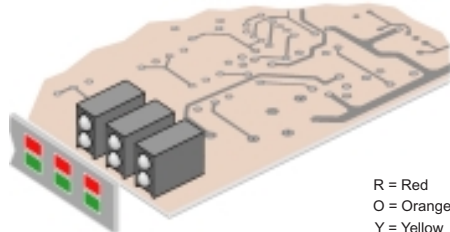
	PCS170TR5	RED	RED Diffused	20	40	1.8/2.4	635	50°	1
	PCS170TY5	YELLOW	YEL Diffused	20	60	1.8/2.4	585	50°	
	PCS170TG5	GREEN	GRN Diffused	20	70	1.8/2.4	565	50°	
	PCS170CR5	RED	RED Clear	10	100	2.0/2.8	635	25°	
	PCS170CY5	YELLOW	YEL Clear	10	90	2.1/2.8	585	25°	
	PCS170CG5	GREEN	GRN Clear	20	110	2.2/3.0	565	25°	
	PCS170TR3-5V	RED	RED Diffused	10	4.0	5.0/7.5	635	60°	
	PCS170TY3-5V	YELLOW	YEL Diffused	10	4.0	5.0/7.5	585	60°	
	PCS170TG3-5V	GREEN	GRN Diffused	12	4.0	5.0/7.5	565	60°	
	PCS170TRG4	RED	Milky White	20	6.0	2.0/2.8	635	120°	
		GREEN		20	6.0	2.1/2.8	568	120°	
	PCS170TWG4	YELLOW	Milky White	20	7.0	2.1/2.8	585	120°	
		GREEN		20	6.0	2.1/2.8	568	120°	

T1 (3mm) Bi-level Indicator LEDs

	21PCS170TR5	RED	RED Diffused	20	40	1.8/2.4	635	50°	2
	21PCS170TY5	YELLOW	YEL Diffused	20	60	1.8/2.4	585	50°	
	21PCS170TG5	GREEN	GRN Diffused	20	70	1.8/2.4	565	50°	
	21PCS170CR5	RED	RED Clear	10	100	2.0/2.8	635	25°	
	21PCS170CY5	YELLOW	YEL Clear	10	90	2.1/2.8	585	25°	
	21PCS170CG5	GREEN	GRN Clear	20	110	2.2/3.0	565	25°	
	21PCS170TR3-5V	RED	RED Diffused	10	4.0	5.0/7.5	635	60°	
	21PCS170TY3-5V	YELLOW	YEL Diffused	10	4.0	5.0/7.5	585	60°	
	21PCS170TG3-5V	GREEN	GRN Diffused	12	4.0	5.0/7.5	565	60°	
	21PCS170TRG4	RED	Milky White	20	6.0	2.0/2.8	635	120°	
		GREEN		20	6.0	2.1/2.8	568	120°	
	21PCS170TWG4	YELLOW	Milky White	20	7.0	2.1/2.8	585	120°	
		GREEN		20	6.0	2.1/2.8	568	120°	

Custom Options: OEM large quantity requirements

Examples of part number ordering code



Typical Application

- R = Red
- O = Orange
- Y = Yellow
- G = Green
- B = Blue

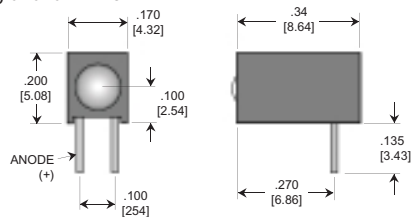
All LEDs same color			
21PCS170TG5			
No. of LEDs high	No. of LEDs across	Body style	LED color
			Lens type: T = diffused

Mixed colors same type LED			
21PCS170T5-Y/G			
No. of LEDs high	No. of LEDs across	Body style	LED (1),(2) color
			Brightness code
			Lens type: T = diffused

All LEDs same Bi-color			
21PCS170TWG4			
No. of LEDs high	No. of LEDs across	Body style	LED color
			Lens type: TW = Milky White

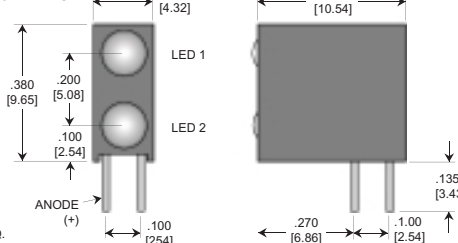
Mixed colors, 5V/12V Resistor LEDs			
21PCS170T3-R/G-5V			
No. of LEDs high	No. of LEDs across	Body style	Resistor value
			LED (1),(2) color
			Brightness code
			Lens type: T = diffused

Figure 1. Single-level LEDs



LEADS .020 [0.5] SQ.

Figure 2. Bi-level LEDs



LEADS .020 [0.5] SQ.

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Part Number	Emitted Color	Lens Color/ Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

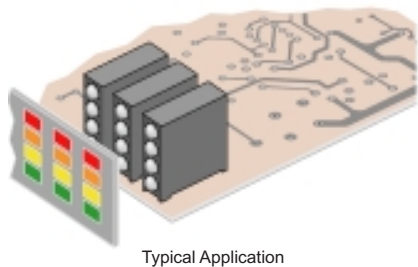
T1 (3mm) Tri-Level Indicator LEDs

	31PCS170TR5	RED	RED Diffused	20	40	1.8/2.4	635	50°	1
	31PCS170TY5	YELLOW	YEL Diffused	20	60	1.8/2.4	585	50°	
	31PCS170TG5	GREEN	GRN Diffused	20	70	1.8/2.4	565	50°	
	31PCS170CR5	RED	RED Clear	10	100	2.0/2.8	635	25°	
	31PCS170CY5	YELLOW	YEL Clear	10	90	2.1/2.8	585	25°	
	31PCS170CG5	GREEN	GRN Clear	20	110	2.2/3.0	565	25°	
	31PCS170TR3-5V	RED	RED Diffused	10	4.0	5.0/7.5	635	60°	
	31PCS170TY3-5V	YELLOW	YEL Diffused	10	4.0	5.0/7.5	585	60°	
	31PCS170TG3-5V	GREEN	GRN Diffused	12	4.0	5.0/7.5	565	60°	
	31PCS170TWRG4	RED	Milky White	20	6.0	2.0/2.8	635	120°	
		GREEN		20	6.0	2.1/2.8	568	120°	
	31PCS170TWYG4	YELLOW	Milky White	20	7.0	2.1/2.8	585	120°	
		GREEN		20	6.0	2.1/2.8	568	120°	

T1 (3mm) Quad-Level Indicator LEDs

	41PCS170TR5	RED	RED Diffused	20	40	1.8/2.4	635	50°	2
	41PCS170TY5	YELLOW	YEL Diffused	20	60	1.8/2.4	585	50°	
	41PCS170TG5	GREEN	GRN Diffused	20	70	1.8/2.4	565	50°	
	41PCS170CR5	RED	RED Clear	10	100	2.0/2.8	635	25°	
	41PCS170CY5	YELLOW	YEL Clear	10	90	2.1/2.8	585	25°	
	41PCS170CG5	GREEN	GRN Clear	20	110	2.2/3.0	565	25°	
	41PCS170TR3-5V	RED	RED Diffused	10	4.0	5.0/7.5	635	60°	
	41PCS170TY3-5V	YELLOW	YEL Diffused	10	4.0	5.0/7.5	585	60°	
	41PCS170TG3-5V	GREEN	GRN Diffused	12	4.0	5.0/7.5	565	60°	
	41PCS170TWRG4	RED	Milky White	20	6.0	2.0/2.8	635	120°	
		GREEN		20	6.0	2.1/2.8	568	120°	
	41PCS170TWYG4	YELLOW	Milky White	20	7.0	2.1/2.8	585	120°	
		GREEN		20	6.0	2.1/2.8	568	120°	

Custom Options: OEM large quantity requirements



Examples of part number ordering code

All LEDs same color		
41PCS170TG5		
No. of LEDs high	No. of LEDs across	LED color
41	170	G = Green
Body style		
Lens type: T = diffused		

Mixed colors same type LED		
41PCS170T5-Y/Y/Y/G		
No. of LEDs high	No. of LEDs across	LED (1),(2),(3),(4) color
41	170	Y = Yellow, Y = Yellow, Y = Yellow, G = Green
Body style		
Brightness code		
Lens type: T = diffused		

All LEDs same Bicolor		
41PCS170TWYG4		
No. of LEDs high	No. of LEDs across	LED color
41	170	W = Milky White, Y = Yellow, G = Green
Body style		
Lens type: TW = Milky White		

Mixed colors, 5V/12V Resistor LEDs		
41PCS170T3-Y/G/Y/G-5V		
No. of LEDs high	No. of LEDs across	LED (1),(2),(3),(4) color
41	170	Y = Yellow, G = Green, Y = Yellow, G = Green
Body style		
Resistor value		
Brightness code		
Lens type: T = diffused		

Figure 1. Tri-level LEDs

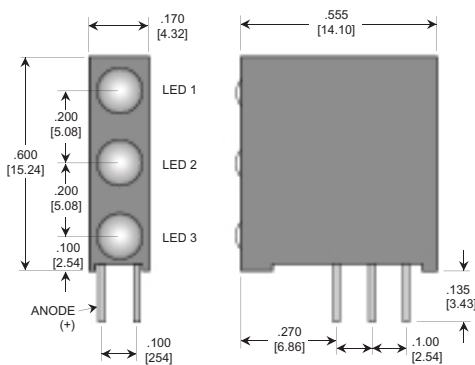
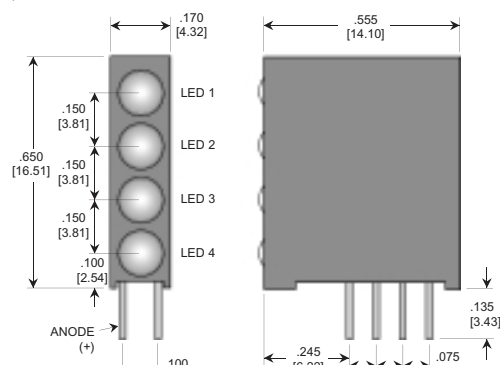


Figure 2. Quad-level LEDs





T1 (3mm) Right-Angled Tricolor PCB LEDs

Features

- Single Tri-Color PCB Replaces Three Single Color PCBs
- Space Saving Design
- Solid-State, High Shock/ Vibration Resistant
- High Intensity Wide Angle Illumination
- 2-Year Warranty
- LED Operating Life: 100,000+ hrs (10+ years)
- Fast Turn On/Off Time I.C. Compatible
- Black Nylon Plastic Block Meets UL 94V-0 and Bellcore Flammability Specifications

Applications

- Circuit Status/Logic Status Fault Indicator
- PCB Mounted Panel Indicator
- Telecom, Datacom

Custom Options

(for qualified applications)

- Sunlight Visible Ultrabrights
- Low Current (2mA) LEDs
- 5mm LED Versions
- Tricolor Clear Illuminators

Part Number	Emitted Color	Lens Color/ Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1 (3mm) Single-Level Cylindrical LEDs

	PCF130TWRG3-3C	HE RED		Milky White	20	4	2.0/2.6	630	130°	1
		GREEN		Milky White	20	4	2.1/2.6	560	130°	
	PCF130TWYG4-3C	YELLOW		Milky White	20	8	2.1/2.6	585	130°	
		GREEN		Milky White	20	10	2.2/2.6	568	130°	



T1 (3mm) Single-Level Dome LEDs

	PCD130TWRG4-3C	HE RED		Milky White	20	25	2.0/2.6	635	40°	2
		GREEN		Milky White	20	35	2.2/2.6	568	40°	
	PCD130TWYG4-3C	YELLOW		Milky White	20	20	2.1/2.6	585	40°	
		GREEN		Milky White	20	35	2.2/2.6	568	40°	



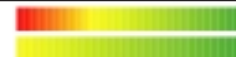
T1 (3mm) Bi-Level Cylindrical LEDs

	21PCF130TWRG3-3C	HE RED		Milky White	20	4	2.0/2.6	630	130°	3
		GREEN		Milky White	20	4	2.1/2.6	560	130°	
	21PCF130TWYG4-3C	YELLOW		Milky White	20	8	2.1/2.6	585	130°	
		GREEN		Milky White	20	10	2.2/2.6	568	130°	



T1 (3mm) Bi-Level Dome LEDs

	21PCD130TWRG4-3C	HE RED		Milky White	20	25	2.0/2.6	635	40°	4
		GREEN		Milky White	20	35	2.2/2.6	568	40°	
	21PCD130TWYG4-3C	YELLOW		Milky White	20	20	2.1/2.6	585	40°	
		GREEN		Milky White	20	35	2.2/2.6	568	40°	



Custom Options: OEM large quantity requirements

Figure 1. Single-Level, Cylindrical LEDs

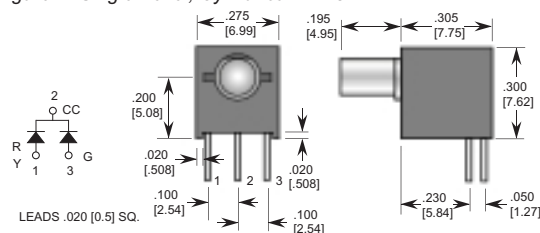


Figure 2. Single-Level, Dome LEDs

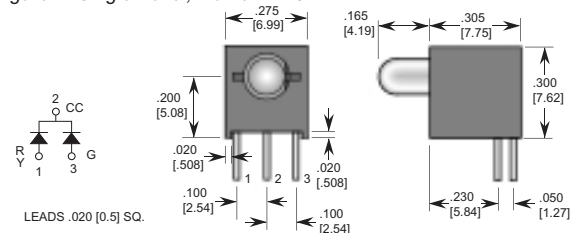


Figure 3. Bi-Level, Cylindrical LEDs

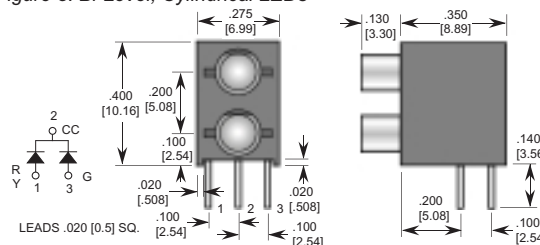
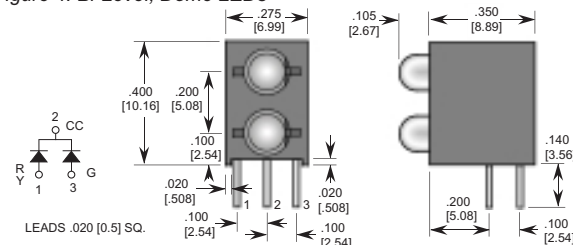


Figure 4. Bi-Level, Dome LEDs



Part Number	Emitted Color	Lens Color/ Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1-3/4 (5mm) High-Efficiency (Diffused) Indicator LEDs

	PCT200TR5A-140 (TR4)	HE RED	RED Diffused	Standard	20	80	2.0/2.6	635	55°	1
	PCT200TO5A-140 (TO4)	ORANGE	ORN Diffused	Standard	20	80	2.0/2.6	610	55°	
	PCT200TY5A-140 (TY4)	YELLOW	YEL Diffused	Standard	20	70	2.1/2.6	585	55°	
	PCT200TG5A-140 (TG5)	HE GREEN	GRN Diffused	Standard	20	70	2.1/2.8	565	55°	
	PCT200TPG5A-140	PURE GREEN	GRN Diffused	Standard	20	15	2.1/2.5	555	55°	
	PCT200TUB5-140	BLUE	BLU Diffused	Standard	20	18	3.8/5.0	430	55°	

T1-3/4 (5mm) Sunlight Visible (Water-Clear) Illuminator Backlight LEDs

	PCT200-0UR-140N	ULTRA RED	Water-Clear	Standard	20	2.0K	2.0/2.6	660	15°	1
	PCT200-0ER-140N	RED	Water-Clear	Standard	20	3.5K	2.2/2.6	633	15°	
	PCT200-0UO-140N	ORANGE	Water-Clear	Standard	20	6.5K	2.2/2.6	612	15°	
	PCT200-0UY-140N	YELLOW	Water-Clear	Standard	20	5.5K	2.2/2.6	595	15°	
	PCT200-0UG-140N	LIME GREEN	Water-Clear	Standard	20	1.0K	2.0/2.6	570	15°	
	PCT200-1CW-140N	COOL WHITE	Water-Clear	Standard	20	930	3.6/4.0	8000K	15°	
	PCT200-0CW-140S	COOL WHITE	Water-Clear	Standard	20	6.0K	3.6/4.0	8000K	20°	
	PCT200-1AG-140N	GREEN	Water-Clear	Standard	20	1.7K	3.5/4.0	525	15°	
	PCT200-0AG-140N	AQUA GREEN	Water-Clear	Standard	20	10.0K	3.5/4.0	525	15°	
	PCT200-1PB-140N	BLUE	Water-Clear	Standard	20	430	3.6/4.0	470	15°	
	PCT200-0PB-140N	BLUE	Water-Clear	Standard	20	3.0K	3.6/4.0	470	15°	

T1-3/4 (5mm) Bicolor (Diffused) LEDs, 2-Leaded

	PCT200TRG4A-140	ULTRA RED	WHT Diffused	Standard	20	120	1.8/2.4	660	55°	1
		HE GREEN		Standard	20	70	2.2/2.6	568	55°	
	PCT200TRG4B-140	HE RED	WHT Diffused	Standard	20	60	2.0/2.6	635	55°	
		HE GREEN		Standard	20	70	2.2/2.6	568	55°	
	PCT200TWRY4B-140	HE RED	WHT Diffused	Standard	20	60	2.0/2.6	635	55°	
		YELLOW		Standard	20	60	2.1/2.6	585	55°	
	PCT200TWYG4B-140	YELLOW	WHT Diffused	Standard	20	60	2.1/2.6	585	55°	
		HE GREEN		Standard	20	70	2.6/2.6	568	55°	

T1-3/4 (5mm) 5 & 12 Volt Integrated Resistor (Diffused) LEDs

	PCT200TR3-5V-140	HE RED	RED Diffused	Standard	20	28	5.0/5.5	635	55°	1
	PCT200TR3-12V-140	HE RED	RED Diffused	Standard	20	8	12/13.5	635	55°	
	PCT200TY3-5V-140	YELLOW	YEL Diffused	Standard	20	21	5.0/5.5	585	55°	
	PCT200TY3-12V-140	YELLOW	YEL Diffused	Standard	20	8	12/13.5	585	55°	
	PCT200TG3-5V-140	HE GREEN	GRN Diffused	Standard	20	28	5.0/5.5	565	55°	
	PCT200TG3-12V-140	HE GREEN	GRN Diffused	Standard	20	8	12/13.5	565	55°	

T1-3/4 (5mm) High-Efficiency, Low Projection (Diffused) Indicator LEDs

	PCT190TR4-140	HE RED	RED Diffused	Low	20	60	2.0/2.6	635	55°	2
	PCT190TY4-140	YELLOW	YEL Diffused	Low	20	50	2.1/2.6	585	55°	
	PCT190TG4-140	HE GREEN	GRN Diffused	Low	20	65	2.2/2.6	565	55°	
	PCT190TWRG4-140 (Bi-Color)	UL RED	WHT Diffused	Low	20	120	1.7/2.6	660	55°	
		HE GREEN			20	80	2.2/2.6	568	55°	

Custom Options: OEM large quantity requirements

Figure 1. Standard Projection

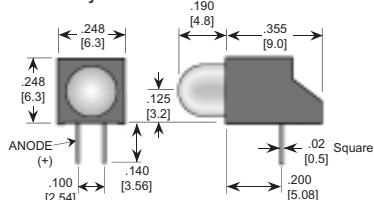
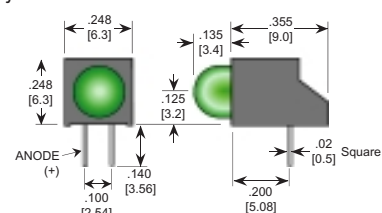


Figure 2. Low Projection



Part Number	Emitted Color	Lens Color/Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1-3/4 (5mm) High-Efficiency (Diffused) Indicator LEDs

	PCT200TR5A-140-SI	HE RED	RED Diffused	Standard	20	80	2.0/2.6	635	55°	1
	PCT200TO5A-140-SI	ORANGE	ORN Diffused	Standard	20	80	2.0/2.6	610	55°	
	PCT200TY5A-140-SI	YELLOW	YEL Diffused	Standard	20	70	2.1/2.6	585	55°	
	PCT200TG5A-140-SI	HE GREEN	GRN Diffused	Standard	20	70	2.1/2.8	565	55°	
	PCT200TPG5A-140-SI	PURE GREEN	GRN Diffused	Standard	20	15	2.1/2.5	555	55°	
	PCT200TUB5-140-SI	BLUE	BLU Diffused	Standard	20	18	3.8/5.0	430	55°	

T1-3/4 (5mm) Sunlight Visible (Tinted) Illuminator Backlight LEDs

	PCT200C-0UR-140N-SI	ULTRA RED	Water-Clear	Standard	20	2.0K	2.0/2.6	660	15°	1
	PCT200C-0ER-140N-SI	RED	Water-Clear	Standard	20	3.5K	2.2/2.6	633	15°	
	PCT200C-0UO-140N-SI	ORANGE	Water-Clear	Standard	20	6.5K	2.2/2.6	612	15°	
	PCT200C-0UY-140N-SI	YELLOW	Water-Clear	Standard	20	5.5K	2.2/2.6	595	15°	
	PCT200C-0UG-140N-SI	LIME GREEN	Water-Clear	Standard	20	1.0K	2.0/2.6	570	15°	
	PCT200C-1CW-140N-SI	COOL WHITE	Water-Clear	Standard	20	930	3.6/4.0	8000K	15°	
	PCT200C-0CW-140S-SI	COOL WHITE	Water-Clear	Standard	20	6.0K	3.6/4.0	8000K	20°	
	PCT200C-1AG-140N-SI	GREEN	Water-Clear	Standard	20	1.7K	3.5/4.0	525	15°	
	PCT200C-0AG-140N-SI	AQUA GREEN	Water-Clear	Standard	20	10.0K	3.5/4.0	525	15°	
	PCT200C-1PB-140N-SI	BLUE	Water-Clear	Standard	20	430	3.6/4.0	470	15°	
	PCT200C-0PB-140N-SI	BLUE	Water-Clear	Standard	20	3.0K	3.6/4.0	470	15°	

T1-3/4 (5mm) Bicolor (Diffused) LEDs, 2-Leaded

	PCT200TRG4A-140-SI	UL RED	RED	WHT Diffused	Standard	20	120	1.8/2.4	660	55°	1
		HE GREEN	GREEN			20	70	2.2/2.6	568	55°	
	PCT200TRG4B-140-SI	HE RED	RED	WHT Diffused	Standard	20	60	2.0/2.6	635	55°	
		HE GREEN	GREEN			20	70	2.2/2.6	568	55°	
	PCT200TRG4C-140-SI	HE RED	RED	WHT Diffused	Standard	20	60	2.0/2.6	635	55°	
		YELLOW	YELLOW			20	60	2.1/2.6	585	55°	
	PCT200TRG4D-140-SI	YELLOW	YELLOW	WHT Diffused	Standard	20	60	2.1/2.6	585	55°	
		HE GREEN	GREEN			20	70	2.6/2.6	568	55°	

T1-3/4 (5mm) 5 & 12 Volt Integrated Resistor (Diffused) LEDs

	PCT200TR3-5V-140-SI	HE RED	RED Diffused	Standard	20	28	5.0/5.5	635	55°	1
	PCT200TR3-12V-140-SI	HE RED	RED Diffused	Standard	20	8	12/13.5	635	55°	
	PCT200TY3-5V-140-SI	YELLOW	YEL Diffused	Standard	20	21	5.0/5.5	585	55°	
	PCT200TY3-12V-140-SI	YELLOW	YEL Diffused	Standard	20	8	12/13.5	585	55°	
	PCT200TG3-5V-140-SI	HE GREEN	GRN Diffused	Standard	20	28	5.0/5.5	565	55°	
	PCT200TG3-12V-140-SI	HE GREEN	GRN Diffused	Standard	20	8	12/13.5	565	55°	

T1-3/4 (5mm) High-Efficiency Medium Projection (Diffused) Indicator LEDs

	14PCT190TR4-140	HE RED	RED Diffused	Medium	20	60	2.0/2.6	635	55°	2
	14PCT190TY4-140	YELLOW	YEL Diffused	Medium	20	50	2.1/2.6	585	55°	
	14PCT190TG4-140	HE GREEN	GRN Diffused	Medium	20	65	2.2/2.6	565	55°	
	14PCT190TRG4-140 (Bi-Color)	UL RED	RED	WHT Diffused	Medium	20	120	1.7/2.6	660	55°
		HE GREEN	GREEN			20	80	2.2/2.6	568	55°

Custom Options:
OEM large quantity requirements

Arrayable Design

Mixed Color PN Example:

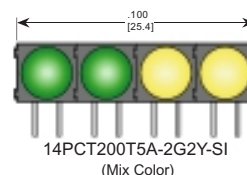
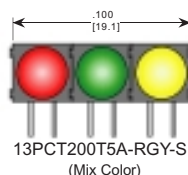
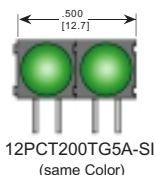


Figure 1. Standard Projection

Arrayable Design

(Not recommended beyond 4 position)
See example above

Custom Options
(for qualified applications)

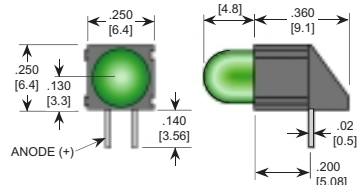
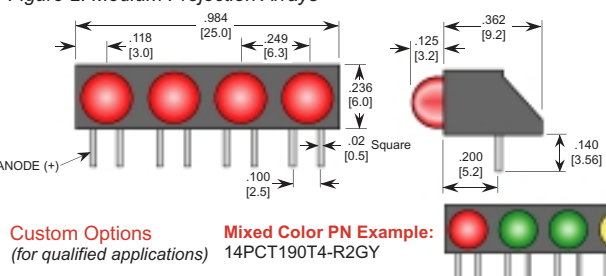


Figure 2. Medium Projection Arrays



Custom Options
(for qualified applications)

Mixed Color PN Example:
14PCT190T4-R2GY

Part Number	Emitted Color	Lens Color/Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1-3/4 (5mm) High-Efficiency (Diffused) Indicator LEDs

	PC200TR5A-140 (TR4)	HE RED	RED Diffused	—	20	80	2.0/2.6	635	55°	1
	PC200TO5A-140 (TO4)	ORANGE	ORN Diffused	—	20	80	2.0/2.6	610	55°	
	PC200TY5A-140 (TY4)	YELLOW	YEL Diffused	—	20	70	2.1/2.6	585	55°	
	PC200TG5A-140 (TG5)	HE GREEN	GRN Diffused	—	20	70	2.1/2.8	565	55°	
	PC200TPG5A-140	PURE GREEN	GRN Diffused	—	20	15	2.1/2.5	555	55°	
	PC200TUB5-140	BLUE	BLU Diffused	—	20	18	3.8/5.0	430	55°	

T1-3/4 (5mm) Bicolor (Diffused) LEDs, 2-Leaded

	PC200TWRG4A-140	UL RED	WHT Diffused	—	20	120	1.8/2.4	660	55°	1
		HE GREEN	WHT Diffused	—	20	70	2.2/2.6	568	55°	
	PC200TWRG4B-140	HE RED	WHT Diffused	—	20	60	2.0/2.6	635	55°	
		HE GREEN	WHT Diffused	—	20	70	2.2/2.6	568	55°	
	PC200TWYG4B-140	YELLOW	WHT Diffused	—	20	60	2.1/2.6	585	55°	
		HE GREEN	WHT Diffused	—	20	70	2.6/2.6	568	55°	

T1-3/4 (5mm) 5 & 12 Volt Integrated Resistor (Diffused) LEDs

	PC200TR3-5V-140	HE RED	RED Diffused	—	20	28	5.0/5.5	635	55°	1
	PC200TR3-12V-140	HE RED	RED Diffused	—	20	8	12/13.5	635	55°	
	PC200TY3-5V-140	YELLOW	YEL Diffused	—	20	21	5.0/5.5	585	55°	
	PC200TY3-12V-140	YELLOW	YEL Diffused	—	20	8	12/13.5	585	55°	
	PC200TG3-5V-140	HE GREEN	GRN Diffused	—	20	28	5.0/5.5	565	55°	
	PC200TG3-12V-140	HE GREEN	GRN Diffused	—	20	8	12/13.5	565	55°	

T1-3/4 (5mm) High-Efficiency (Diffused) Indicator LEDs

	PCT220TR5A-140 (TR4)	HE RED	RED Diffused	—	20	80	2.0/2.6	635	55°	2
	PCT220TO5A-140 (TO4)	ORANGE	ORN Diffused	—	20	80	2.0/2.6	610	55°	
	PCT220TY5A-140 (TY4)	YELLOW	YEL Diffused	—	20	70	2.1/2.6	585	55°	
	PCT220TG5A-140 (TG5)	HE GREEN	GRN Diffused	—	20	70	2.1/2.8	565	55°	
	PCT220TPG5A-140	PURE GREEN	GRN Diffused	—	20	15	2.1/2.5	555	55°	
	PCT220TUB5-140	BLUE	BLU Diffused	—	20	18	3.8/5.0	430	55°	

T1-3/4 (5mm) Bi-Color (Diffused) LEDs, 2-Leaded

	PCT220TWRG4A-140	UL RED	WHT Diffused	—	20	120	1.8/2.4	660	55°	2
		HE GREEN	WHT Diffused	—	20	70	2.2/2.6	568	55°	
	PCT220TWRG4B-140	HE RED	WHT Diffused	—	20	60	2.0/2.6	635	55°	
		HE GREEN	WHT Diffused	—	20	70	2.2/2.6	568	55°	
	PCT220TWYG4B-140	YELLOW	WHT Diffused	—	20	60	2.1/2.6	585	55°	
		HE GREEN	WHT Diffused	—	20	70	2.6/2.6	568	55°	

T1-3/4 (5mm) 5 & 12 Volt Integrated Resistor (Diffused) LEDs

	PCT220TR3-5V-140	HE RED	RED Diffused	—	20	28	5.0/5.5	635	55°	2
	PCT220TR3-12V-140	HE RED	RED Diffused	—	20	8	12/13.5	635	55°	
	PCT220TY3-5V-140	YELLOW	YEL Diffused	—	20	21	5.0/5.5	585	55°	
	PCT220TY3-12V-140	YELLOW	YEL Diffused	—	20	8	12/13.5	585	55°	
	PCT220TG3-5V-140	HE GREEN	GRN Diffused	—	20	28	5.0/5.5	565	55°	
	PCT220TG3-12V-140	HE GREEN	GRN Diffused	—	20	8	12/13.5	565	55°	

Custom Options: OEM large quantity requirements

Figure 1. Right-Angle LEDs

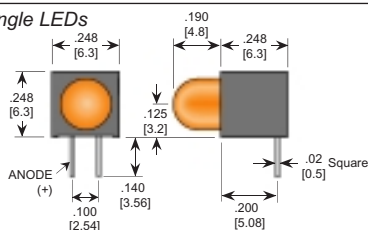
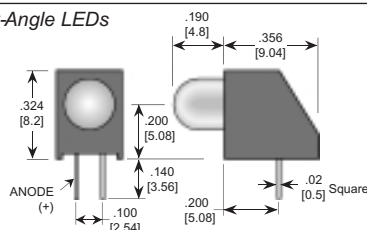


Figure 2. Right-Angle LEDs



Part Number	Emitted Color	Lens Color/Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
				I _F (mA)	I _V (mcd) typ	V _F (V) typ/max	λ _P (nm)		

T1-3/4 (5mm) High-Efficiency (Diffused) Indicator LEDs

	PCT230TR5A-140 (TR4)	HE RED	RED Diffused	—	20	80	2.0/2.6	635	55°	1
	PCT230TO5A-140 (TO4)	ORANGE	ORN Diffused	—	20	80	2.0/2.6	610	55°	
	PCT230TY5A-140 (TY4)	YELLOW	YEL Diffused	—	20	70	2.1/2.6	585	55°	
	PCT230TG5A-140 (TG5)	HE GREEN	GRN Diffused	—	20	70	2.1/2.8	565	55°	
	PCT230TPG5A-140	PURE GREEN	GRN Diffused	—	20	15	2.1/2.5	555	55°	
	PCT230TUB5-140	BLUE	BLU Diffused	—	20	18	3.8/5.0	430	55°	

T1-3/4 (5mm) Bicolor (Diffused) 2-Leaded

	PCT230TWRG4A-140	UL RED	WHT Diffused	—	20	120	1.8/2.4	660	55°	1
		HE GREEN	WHT Diffused		20	70	2.2/2.6	568	55°	
	PCT230TWRG4B-140	HE RED	WHT Diffused	—	20	60	2.0/2.6	635	55°	
		HE GREEN	WHT Diffused		20	70	2.2/2.6	568	55°	
	PCT230TWYG4B-140	YELLOW	WHT Diffused	—	20	60	2.1/2.6	585	55°	
		HE GREEN	WHT Diffused		20	70	2.6/2.6	568	55°	

T1-3/4 (5mm) 5 & 12 Volt Integrated Resistor (Diffused) LEDs

	PCT230TR3-5V-140	HE RED	RED Diffused	—	20	28	5.0/5.5	635	55°	1
	PCT230TR3-12V-140	HE RED	RED Diffused	—	20	8	12/13.5	635	55°	
	PCT230TY3-5V-140	YELLOW	YEL Diffused	—	20	21	5.0/5.5	585	55°	
	PCT230TY3-12V-140	YELLOW	YEL Diffused	—	20	8	12/13.5	585	55°	
	PCT230TG3-5V-140	HE GREEN	GRN Diffused	—	20	28	5.0/5.5	565	55°	
	PCT230TG3-12V-140	HE GREEN	GRN Diffused	—	20	8	12/13.5	565	55°	

T1-3/4 (5mm) High-Efficiency (Diffused) Indicator LEDs

	PCT240TR5A-140 (TR4)	HE RED	RED Diffused	—	20	80	2.0/2.6	635	55°	2
	PCT240TO5A-140 (TO4)	ORANGE	ORN Diffused	—	20	80	2.0/2.6	610	55°	
	PCT240TY5A-140 (TY4)	YELLOW	YEL Diffused	—	20	70	2.1/2.6	585	55°	
	PCT240TG5A-140 (TG5)	HE GREEN	GRN Diffused	—	20	70	2.1/2.8	565	55°	
	PCT240TPG5A-140	PURE GREEN	GRN Diffused	—	20	15	2.1/2.5	555	55°	
	PCT240TUB5-140	BLUE	BLU Diffused	—	20	18	3.8/5.0	430	55°	

T1-3/4 (5mm) Bicolor (Diffused) LEDs, 2-Leaded

	PCT240TWRG4A-140	UL RED	WHT Diffused	—	20	120	1.8/2.4	660	55°	2
		HE GREEN	WHT Diffused		20	70	2.2/2.6	568	55°	
	PCT240TWRG4B-140	HE RED	WHT Diffused		20	60	2.0/2.6	635	55°	
		HE GREEN	WHT Diffused		20	70	2.2/2.6	568	55°	
	PCT240TWYG4B-140	YELLOW	WHT Diffused	—	20	60	2.1/2.6	585	55°	
		HE GREEN	WHT Diffused		20	70	2.6/2.6	568	55°	

T1-3/4 (5mm) 5 & 12 Volt Integrated Resistor (Diffused) LEDs

	PCT240TR3-5V-140	HE RED	RED Diffused	—	20	28	5.0/5.5	635	55°	2
	PCT240TR3-12V-140	HE RED	RED Diffused	—	20	8	12/13.5	635	55°	
	PCT240TY3-5V-140	YELLOW	YEL Diffused	—	20	21	5.0/5.5	585	55°	
	PCT240TY3-12V-140	YELLOW	YEL Diffused	—	20	8	12/13.5	585	55°	
	PCT240TG3-5V-140	HE GREEN	GRN Diffused	—	20	28	5.0/5.5	565	55°	
	PCT240TG3-12V-140	HE GREEN	GRN Diffused	—	20	8	12/13.5	565	55°	

Custom Options: OEM large quantity requirements

Figure 1. Right-Angle LEDs

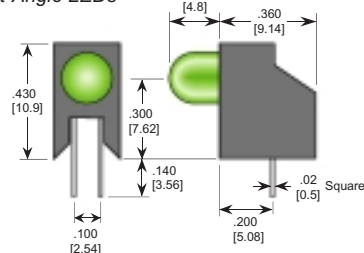
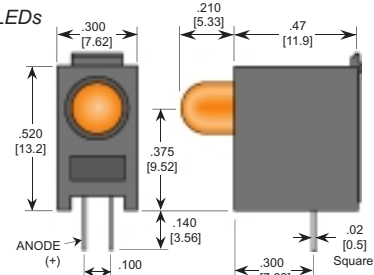


Figure 2. Right-Angle LEDs



Log # 125Lpg3 Rev 07-2001



T1-3/4 (5mm) Right-Angled Bicolor PCB LEDs

Part Number	Emitted Color	Lens Color/ Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2 $\theta_{1/2}$	Figure
				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ_p (nm)		

T1-3/4 (5mm) Bicolor (Diffused) LEDs, 3-Leaded (Common Cathode)

	PCT200TWRG4B-3C-140	HE RED	●	WHT Diffused	Standard	20	35	2.0/2.6	635	40°	1
		HE GREEN	●		Standard	20	45	2.2/2.6	568	40°	
	PCT200TWYG4B-3C-140	YELLOW	●	WHT Diffused	Standard	20	30	2.1/2.6	585	30°	
		HE GREEN	●		Standard	20	45	2.2/2.6	568	30°	

T1-3/4 (5mm) Bicolor (Diffused) LEDs, 3-Leaded (Common Anode)

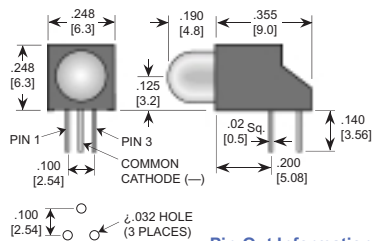
	PCT200TWRG4B-3A-140	HE RED	●	WHT Diffused	Standard	20	6	2.0/2.8	635	50°	2
		HE GREEN	●		Standard	20	6	2.1/2.8	568	50°	

T1-3/4 (5mm) Bicolor (Diffused) LEDs, 3-Leaded (Common Cathode)

	PCT200TWRG4H-3C-140	HE RED	●	WHT Diffused	Standard	20	40	2.0/2.6	642	35 _i	3
		HE GREEN	●		Standard	20	50	2.2/2.6	568	35 _i	

Custom Options: OEM large quantity requirements

Figure 1. Standard Projection, 3-Leaded



Pin-Out Information

Part Numbers	Pin 1	Pin 3
PCT200TWRG4B-3C	R+	G+
PC2T00TWYG4B-3C	Y+	G+

Figure 2. Standard Projection, 3-Leaded

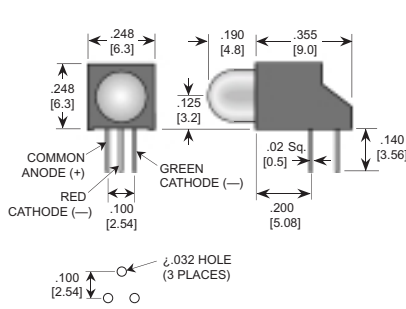
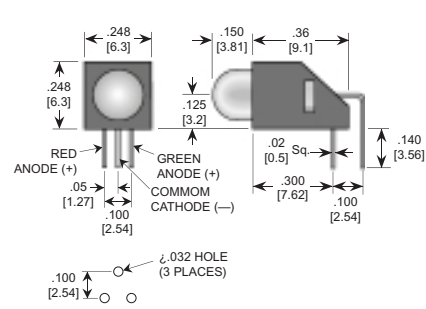


Figure 3. Standard Projection, 3-Leaded



Log # 125L pg1B Rev 07-2001

Part Number	Emitted Color	Lens Color/Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1-3/4 (5mm) Tricolor, High-Efficiency LEDs without Tab

	PC300TWRG4B-3A	HE RED	●	White Diffused	Standard	20	20	2.2/2.6	635	50°	1
		HE GREEN	●			20	20	2.2/2.6	568	50°	
	PC300TWRG4B-3C	HE RED	●	White Diffused	Standard	20	35	2.0/2.6	635	40°	
		HE GREEN	●			20	45	2.2/2.6	568	40°	

T1-3/4 (5mm) Tricolor, High-Efficiency LEDs with Tab

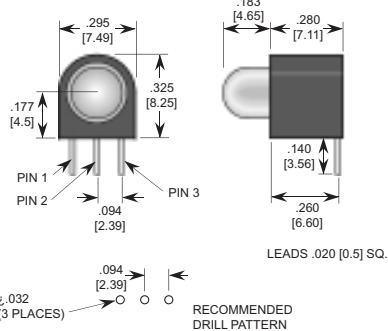
	PC300TWRG4B-3A-T	HE RED	●	White Diffused	Standard	20	20	2.2/2.6	635	50°	2
		HE GREEN	●			20	20	2.2/2.6	568	50°	
	PC300TWRG4B-3C-T	HE RED	●	White Diffused	Standard	20	35	2.0/2.6	635	40°	
		HE GREEN	●			20	45	2.2/2.6	568	40°	

T1-3/4 (5mm) Tricolor, High-Efficiency LEDs

	PCT300TWRG4B-3A	UL RED	●	White Diffused	Long	20	20	2.2/2.6	635	50°	3
		HE GREEN	●			20	20	2.2/2.6	568	50°	
	PCT300TWRG4B-3C	HE RED	●	White Diffused	Long	20	35	2.0/2.6	635	40°	
		HE GREEN	●			20	45	2.2/2.6	568	40°	
	PCT300TWOG4B-3C	ORANGE	●	White Diffused	Long	20	30	2.0/2.6	610	30°	
		HE GREEN	●			20	65	2.2/2.6	568	30°	
	PCT300TWYG4B-3C	YELLOW	●	White Diffused	Long	20	30	2.1/2.6	585	30°	
		HE GREEN	●			20	45	2.2/2.6	568	30°	

Custom Options: OEM large quantity requirements

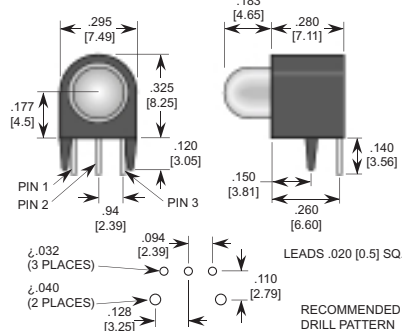
Figure 1. 3-Leaded, Standard Projection without Tab



Pin-Out Information

Part Numbers	Pin 1	Pin 2	Pin 3
PC300TWRG4B-3A PC300TWRG4B-3C	COM+ R+	R- COM-	G- G+

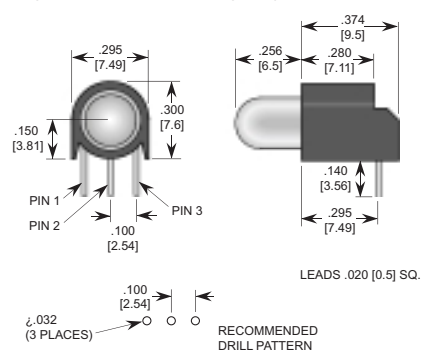
Figure 2. 3-Leaded, Standard Projection with Tab



Pin-Out Information

Part Numbers	Pin 1	Pin 2	Pin 3
PC300TWRG4B-3A-T PC300TWRG4B-3C-T	COM+ R+	R- COM-	G- G+

Figure 3. 3-Leaded, Long Projection



Pin-Out Information

Part Numbers	Pin 1	Pin 2	Pin 3
PCT300TWRG4B-3A PCT300TWRG4B-3C PCT300TWOG4B-3C PCT300TWYG4B-3C	COM+ R+ O+ Y+	R- COM- COM- COM-	G- G+ G+ G+

Part Number	Emitted Color	Lens Color/ Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1-3/4 (5mm) High-Efficiency (Diffused) Indicator LEDs

Same Color Mix Color (See Fig. 1 Part Number Example)	21PCT200TR5A-140 (TR4)	HE RED	RED Diffused	Standard	20	80	2.0/2.6	635	55°	1
	21PCT200TO5A-140 (TO4)	ORANGE	ORN Diffused	Standard	20	80	2.0/2.6	610	55°	
	21PCT200TY5A-140 (TY4)	YELLOW	YEL Diffused	Standard	20	70	2.1/2.6	585	55°	
	21PCT200TG5A-140 (TG5)	HE GREEN	GRN Diffused	Standard	20	70	2.1/2.8	565	55°	
	21PCT200TPG5A-140	PURE GREEN	GRN Diffused	Standard	20	15	2.1/2.5	555	55°	
	21PCT200TUB5-140	BLUE	BLU Diffused	Standard	20	18	3.8/5.0	430	55°	

T1-3/4 (5mm) Sunlight Visible (Water-Clear) Illuminator Backlight LEDs

Same Color Mix Color (See Fig. 1 Part Number Example)	21PCT200-0UR-140N	ULTRA RED	Water-Clear	Standard	20	2.0K	2.0/2.6	660	15°	1
	21PCT200-0ER-140N	RED	Water-Clear	Standard	20	3.5K	2.2/2.6	633	15°	
	21PCT200-0UO-140N	ORANGE	Water-Clear	Standard	20	6.5K	2.2/2.6	612	15°	
	21PCT200-0UY-140N	YELLOW	Water-Clear	Standard	20	5.5K	2.2/2.6	595	15°	
	21PCT200-0UG-140N	LIME GREEN	Water-Clear	Standard	20	1.0K	2.0/2.6	570	15°	
	21PCT200-1CW-140N	COOL WHITE	Water-Clear	Standard	20	930	3.6/4.0	8000K	15°	
	21PCT200-0CW-140S	COOL WHITE	Water-Clear	Standard	20	6.0K	3.6/4.0	8000K	20°	
	21PCT200-1AG-140N	GREEN	Water-Clear	Standard	20	1.7K	3.5/4.0	525	15°	
	21PCT200-0AG-140N	AQUA GREEN	Water-Clear	Standard	20	10.0K	3.5/4.0	525	15°	
	21PCT200-1PB-140N	BLUE	Water-Clear	Standard	20	430	3.6/4.0	470	15°	
	21PCT200-0PB-140N	BLUE	Water-Clear	Standard	20	3.0K	3.6/4.0	470	15°	

T1-3/4 (5mm) Bicolor (Diffused) LEDs, 2-Leaded

Same Color Mix Color (See Fig. 1 Part Number Example)	21PCT200TWRG4A-140	ULTRA RED	WHT Diffused	Standard	20	120	1.8/2.4	660	55°	1
		HE GREEN	WHT Diffused	Standard	20	70	2.2/2.6	568	55°	
	21PCT200TWRG4B-140	HE RED	WHT Diffused	Standard	20	60	2.0/2.6	635	55°	
		HE GREEN	WHT Diffused	Standard	20	70	2.2/2.6	568	55°	
	21PCT200TWRY4B-140	HE RED	WHT Diffused	Standard	20	60	2.0/2.6	635	55°	
		YELLOW	WHT Diffused	Standard	20	60	2.1/2.6	585	55°	
	21PCT200TWYG4B-140	YELLOW	WHT Diffused	Standard	20	60	2.1/2.6	585	55°	
		HE GREEN	WHT Diffused	Standard	20	70	2.6/2.6	568	55°	

T1-3/4 (5mm) 5 & 12 Volt Integrated Resistor (Diffused) LEDs

Same Color Mix Color (See Fig. 1 Part Number Example)	21PCT200TR3-5V-140	HE RED	RED Diffused	Standard	20	28	5.0/5.5	635	55°	1
	21PCT200TR3-12V-140	HE RED	RED Diffused	Standard	20	8	12/13.5	635	55°	
	21PCT200TY3-5V-140	YELLOW	YEL Diffused	Standard	20	21	5.0/5.5	585	55°	
	21PCT200TY3-12V-140	YELLOW	YEL Diffused	Standard	20	8	12/13.5	585	55°	
	21PCT200TG3-5V-140	HE GREEN	GRN Diffused	Standard	20	28	5.0/5.5	565	55°	
	21PCT200TG3-12V-140	HE GREEN	GRN Diffused	Standard	20	8	12/13.5	565	55°	

T1-3/4 (5mm) High-Efficiency, Medium Projection (Diffused) Indicator LEDs

Same Color Mix Color (See Fig. 2 Part Number Example)	21PCT190TR4-140	HE RED	RED Diffused	Medium	20	60	2.0/2.6	635	55°	2
	21PCT190TY4-140	YELLOW	YEL Diffused	Medium	20	50	2.1/2.6	585	55°	
	21PCT190TG4-140	HE GREEN	GRN Diffused	Medium	20	65	2.2/2.6	565	55°	
	21PCT190TWRG4-140 (Bi-Color)	UL RED	WHT Diffused	Medium	20	120	1.7/2.6	660	55°	
		HE GREEN	WHT Diffused		20	80	2.2/2.6	568	55°	

Custom Options: OEM large quantity requirements

Figure 1. Standard Projection

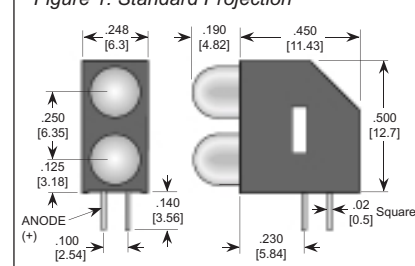
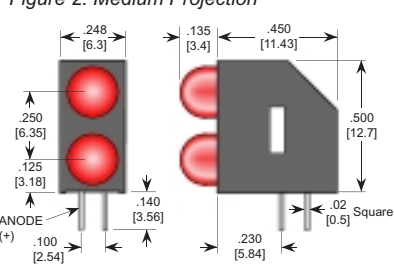


Figure 2. Medium Projection



Part Number Example: Mix Color

21PCT190T4-G/Y (Green top, Yellow bottom)

21PCT190T4-G/Y

No. of LEDs High
No. of LEDs Across
Body Style
Bottom Color
Top Color
Brightness
Lens Type:
T= Diffused

Part Number Example: 1 Blank Space

21PCT190T4-Y/x (Yellow top, Blank bottom)

Part Number	Emitted Color	Lens Color/ Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1-3/4 (5mm) High-Efficiency (Diffused) Indicator LEDs

	21PCT200TR5A-140-SI (TR4)	HE RED	RED Diffused	Standard	20	80	2.0/2.6	635	55°	1
	21PCT200TO5A-140-SI (TO4)	ORANGE	ORN Diffused	Standard	20	80	2.0/2.6	610	55°	
	21PCT200TY5A-140-SI (TY4)	YELLOW	YEL Diffused	Standard	20	70	2.1/2.6	585	55°	
	21PCT200TG5A-140-SI (TG5)	HE GREEN	GRN Diffused	Standard	20	70	2.1/2.8	565	55°	
	21PCT200TPG5A-140-SI	PURE GREEN	GRN Diffused	Standard	20	15	2.1/2.5	555	55°	
	21PCT200TUB5-140-SI	BLUE	BLU Diffused	Standard	20	18	3.8/5.0	430	55°	

T1-3/4 (5mm) Sunlight Visible (Water-Clear) Illuminator Backlight LEDs

	21PCT200-0UR-140N-SI	ULTRA RED	Water-Clear	Standard	20	2.0K	2.0/2.6	660	15°	1
	21PCT200-0ER-140N-SI	RED	Water-Clear	Standard	20	3.5K	2.2/2.6	633	15°	
	21PCT200-0UO-140N-SI	ORANGE	Water-Clear	Standard	20	6.5K	2.2/2.6	612	15°	
	21PCT200-0UY-140N-SI	YELLOW	Water-Clear	Standard	20	5.5K	2.2/2.6	595	15°	
	21PCT200-0UG-140N-SI	LIME GREEN	Water-Clear	Standard	20	1.0K	2.0/2.6	570	15°	
	21PCT200-1CW-140N-SI	COOL WHITE	Water-Clear	Standard	20	930	3.6/4.0	8000K	15°	
	21PCT200-0CW-140S-SI	COOL WHITE	Water-Clear	Standard	20	6.0K	3.6/4.0	8000K	20°	
	21PCT200-1AG-140N-SI	GREEN	Water-Clear	Standard	20	1.7K	3.5/4.0	525	15°	
	21PCT200-0AG-140N-SI	AQUA GREEN	Water-Clear	Standard	20	10.0K	3.5/4.0	525	15°	
	21PCT200-1PB-140N-SI	BLUE	Water-Clear	Standard	20	430	3.6/4.0	470	15°	
	21PCT200-0PB-140N-SI	BLUE	Water-Clear	Standard	20	3.0K	3.6/4.0	470	15°	

T1-3/4 (5mm) Bicolor (Diffused) LEDs, 2-Leaded

	21PCT200TRG4A-140-SI	ULTRA RED	WHT Diffused	Standard	20	120	1.8/2.4	660	55°	1
		HE GREEN		Standard	20	70	2.2/2.6	568	55°	
	21PCT200TRG4B-140-SI	HE RED	WHT Diffused	Standard	20	60	2.0/2.6	635	55°	
		HE GREEN		Standard	20	70	2.2/2.6	568	55°	
	21PCT200TRG4Y-140-SI	HE RED	WHT Diffused	Standard	20	60	2.0/2.6	635	55°	
		YELLOW		Standard	20	60	2.1/2.6	585	55°	
	21PCT200TRG4B-140-SI	YELLOW	WHT Diffused	Standard	20	60	2.1/2.6	585	55°	
		HE GREEN		Standard	20	70	2.2/2.6	568	55°	

T1-3/4 (5mm) 5 & 12 Volt Integrated Resistor (Diffused) LEDs

	21PCT200TR3-5V-140-SI	HE RED	RED Diffused	Standard	20	28	5.0/5.5	635	55°	1
	21PCT200TR3-12V-140-SI	HE RED	RED Diffused	Standard	20	8	12/13.5	635	55°	
	21PCT200TY3-5V-140-SI	YELLOW	YEL Diffused	Standard	20	21	5.0/5.5	585	55°	
	21PCT200TY3-12V-140-SI	YELLOW	YEL Diffused	Standard	20	8	12/13.5	585	55°	
	21PCT200TG3-5V-140-SI	HE GREEN	GRN Diffused	Standard	20	28	5.0/5.5	565	55°	
	21PCT200TG3-12V-140-SI	HE GREEN	GRN Diffused	Standard	20	8	12/13.5	565	55°	

T1-3/4 (5mm) High-Efficiency, Medium Projection (Diffused) Indicator LEDs

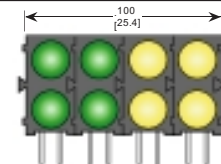
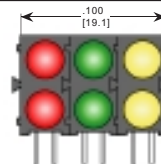
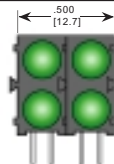
	21PCT190TR4-140-SI	HE RED	RED Diffused	Medium	20	60	2.0/2.6	635	55°	2
	21PCT190TY4-140-SI	YELLOW	YEL Diffused	Medium	20	50	2.1/2.6	585	55°	
	21PCT190TG4-140-SI	HE GREEN	GRN Diffused	Medium	20	65	2.2/2.6	565	55°	
	21PCT190TRG4-140-SI (Bi-Color)	UL RED	WHT Diffused	Medium	20	120	1.7/2.6	660	55°	
		HE GREEN			20	80	2.2/2.6	568	55°	

Custom Options:
OEM large quantity requirements

Arrayable Design

**Mixed Color
PN Example:**

Standard Projection: 22PCT200TG5A-SI
Medium Projection: 22PCT190TG5A-SI
(same Color)



23PCT200T5A-RGY/RGY-SI
23PCT190T5A-RGY/RGY-SI
(Mix Color)

24PCT200T5A-2G2Y/2G2Y-SI
24PCT190T5A-2G2Y/2G2Y-SI
(Mix Color)

Figure 1. Standard Projection

Arrayable Design

(Not recommended beyond
4 position)

See example above

Custom Options
(for qualified applications)

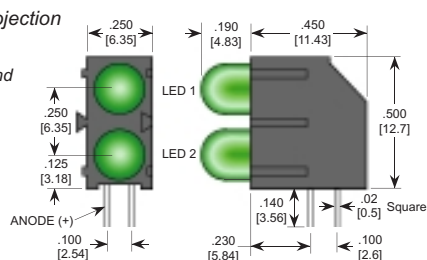


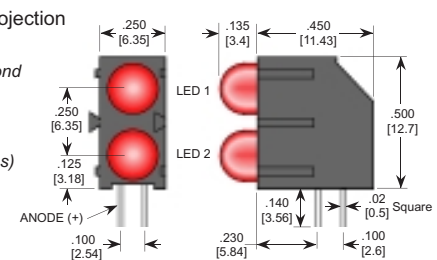
Figure 2. Medium Projection

Arrayable Design

(Not recommended beyond
4 position)

See example above

Custom Options
(for qualified applications)



Log # 125L pg9 Rev 07-2001

T1-3/4 (5mm) Right-Angled Bi-Level PCB LEDs

Part Number	Emitted Color	Lens Color/Type	Projection Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
				I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

T1-3/4 (5mm) High-Efficiency (Diffused) Indicator LEDs

Same Color Mix Color (See Fig. 1 Part Number Example)	21PCS200TR5A-140 (TR4)	HE RED	RED Diffused	Low	20	80	2.0/2.6	635	55°	1
	21PCS200TO5A-140 (TO4)	ORANGE	ORN Diffused	Low	20	80	2.0/2.6	610	55°	
	21PCS200TY5A-140 (TY4)	YELLOW	YEL Diffused	Low	20	70	2.1/2.6	585	55°	
	21PCS200TG5A-140 (TG5)	HE GREEN	GRN Diffused	Low	20	70	2.1/2.8	565	55°	
	21PCS200TPG5A-140	PURE GREEN	GRN Diffused	Low	20	15	2.1/2.5	555	55°	
	21PCS200TUB5-140	BLUE	BLU Diffused	Low	20	18	3.8/5.0	430	55°	

T1-3/4 (5mm) Sunlight Visible (Water-Clear) Illuminator Backlight LEDs

Same Color Mix Color (See Fig. 1 Part Number Example)	21PCS200-OUR-140N	ULTRA RED	Water-Clear	Low	20	2.0K	2.0/2.6	660	15°	1
	21PCS200-0ER-140N	RED	Water-Clear	Low	20	3.5K	2.2/2.6	633	15°	
	21PCS200-0UO-140N	ORANGE	Water-Clear	Low	20	6.5K	2.2/2.6	612	15°	
	21PCS200-0UY-140N	YELLOW	Water-Clear	Low	20	5.5K	2.2/2.6	595	15°	
	21PCS200-0UG-140N	LIME GREEN	Water-Clear	Low	20	1.0K	2.0/2.6	570	15°	
	21PCS200-1CW-140N	COOL WHITE	Water-Clear	Low	20	930	3.6/4.0	8000K	15°	
	21PCS200-0CW-140S	COOL WHITE	Water-Clear	Low	20	6.0K	3.6/4.0	8000K	20°	
	21PCS200-1AG-140N	GREEN	Water-Clear	Low	20	1.7K	3.5/4.0	525	15°	
	21PCS200-0AG-140N	AQUA GREEN	Water-Clear	Low	20	10.0K	3.5/4.0	525	15°	
	21PCS200-1PB-140N	BLUE	Water-Clear	Low	20	430	3.6/4.0	470	15°	
	21PCS200-0PB-140N	BLUE	Water-Clear	Low	20	3.0K	3.6/4.0	470	15°	

T1-3/4 (5mm) Bicolor (Diffused) LEDs, 2-Leaded

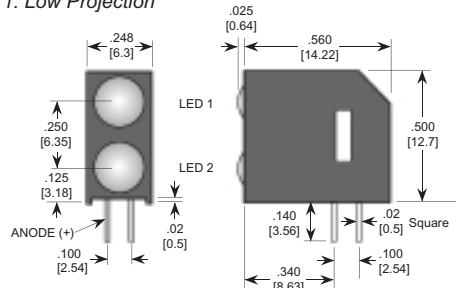
Same Color Mix Color (See Fig. 1 Part Number Example)	21PCS200TWRG4A-140	ULTRA RED	WHT Diffused	Low	20	120	1.8/2.4	660	55°	1
		HE GREEN		Low	20	70	2.2/2.6	568	55°	
	21PCS200TWRG4B-140	HE RED	WHT Diffused	Low	20	60	2.0/2.6	635	55°	
		HE GREEN		Low	20	70	2.2/2.6	568	55°	
	21PCS200TWRY4B-140	HE RED	WHT Diffused	Low	20	60	2.0/2.6	635	55°	
		YELLOW		Low	20	60	2.1/2.6	585	55°	
	21PCS200TWYG4B-140	YELLOW	WHT Diffused	Low	20	60	2.1/2.6	585	55°	
		HE GREEN		Low	20	70	2.6/2.6	568	55°	

T1-3/4 (5mm) 5 & 12 Volt Integrated Resistor (Diffused) LEDs

Same Color Mix Color (See Fig. 1 Part Number Example)	21PCS200TR3-5V-140	HE RED	RED Diffused	Low	20	28	5.0/5.5	635	55°	1
	21PCS200TR3-12V-140	HE RED	RED Diffused	Low	20	8	12/13.5	635	55°	
	21PCS200TY3-5V-140	YELLOW	YEL Diffused	Low	20	21	5.0/5.5	585	55°	
	21PCS200TY3-12V-140	YELLOW	YEL Diffused	Low	20	8	12/13.5	585	55°	
	21PCS200TG3-5V-140	HE GREEN	GRN Diffused	Low	20	28	5.0/5.5	565	55°	
	21PCS200TG3-12V-140	HE GREEN	GRN Diffused	Low	20	8	12/13.5	565	55°	

Custom Options: OEM large quantity requirements

Figure 1. Low Projection



Part Number Example: Mix Color

21PCS200T5A-G/Y (Green top, Yellow bottom)

21PCS200T5A-G/Y

No. of LEDs High
 No. of LEDs Across
 Body Style
 Internal Ref.
 Lens Type: T= Diffused

Part Number Example: 1 Blank Space

21PCS200T5A-G/x (Green top, Blank bottom)

Features

- Single Tricolor PCB Replaces Three Single Color PCBs
- Space Saving Design
- Solid-State, High Shock/ Vibration Resistant
- High Intensity Wide Angle Illumination
- 2-Year Warranty
- LED Operating Life: 100,000+ hrs (10+ years)
- Fast Turn On/Off Time I.C. Compatible
- Black Nylon Plastic Block Meets UL 94V-0 and Bellcore Flammability Specifications

Applications

- Circuit Status/Logic Status Fault Indicator
- PCB Mounted Panel Indicator
- Telecom, Datacom

Custom Options

(for qualified applications)

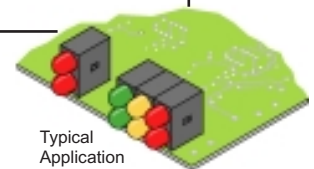
- Sunlight Visible Ultrabrights
- Low Current (2mA) LEDs
- 3mm LED Versions
- Tricolor Clear Illuminators
- Single Colors Available

Part Number	Emitted Color	Lens Color/ Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

5mm Tricolor Bi-Level, 3 Leaded Standard Dome

	21PCT200TWRG4H-3C	HE RED		Milky White	20	15.0	1.9/2.4	635	65°	1	
		HE GREEN			20	25.0	2.1/2.7	568	65°		
	21PCT200TWYG4H-3C	YELLOW		Milky White	20	15.0	2.0/2.6	585	65°		
		HE GREEN			20	25.0	2.1/2.7	568	65°		
	Special Notes: 1. Available with top or bottom LED position blank Example: 21PCT200TW4H-x/RG-3C (Top blank)										
	2. Available in single same color in top and bottom position. Example: 21PCT200TR4-140 (Red top and bottom)										
3. Available in single mix color in top and bottom position. Example: 21PCT200T4-Y/G-140 (Yellow top and Green bottom)											

Optional Single Color Examples:
(for qualified applications)



2 x 5mm Tricolor Bi-Level, 3 Leaded Rectangular

	21RPT280TWRG4H-3C	HE RED		Milky White	20	5.6	1.9/2.4	635	125°	2	
		HE GREEN			20	5.6	2.1/2.7	568	125°		
	21RPT280TWYG4H-3C	YELLOW		Milky White	20	2.5	2.0/2.6	585	125°		
		HE GREEN			20	4.0	2.1/2.7	568	125°		
	Special Notes: 1. Available with top or bottom LED position blank Example: 21RPT280TW4H-x/RG-3C (Top blank)										
	2. Available in single same color in top and bottom position. Example: 21RPT280TR4-140 (Red top and bottom)										
3. Available in single mix color in top and bottom position. Example: 21RPT280T4-Y/G-140 (Yellow top and Green bottom)											

Optional Single Color Examples:
(for qualified applications)



Figure 1. Bi-Level, 3 Leaded Dome

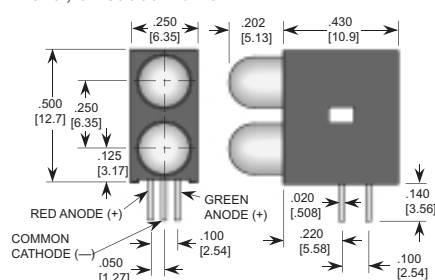
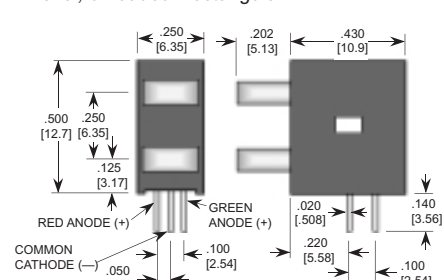


Figure 2. Bi-Level, 3 Leaded Rectangular





15-LED (1.8x5mm) Circular & Linear Bargraphs

Features

- 5-10-15 Single Color, Sunlight Visible LEDs in a Linear Arrangement
- Uniform LED Appearance
- Solid-State, High Shock/Vibration Resistant
- Segment Size: 1.8 x 5mm
- LED Operating Life: 100,000+ hrs (10+ years)
- New LED Chip Technology: InGaAlP, GaN
- Fast Turn On/Off Time
- High On/Off Contrast
- Linear Bargraphs are Dip-Socket Compatible

Applications

- Avionics Instrumentation
- Process Control Gauges
- Audio/Video Level Indicators
- Temperature Indicators
- Speedometer

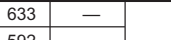
Custom Options

(for qualified applications)

- Colors: Orange, Lime Green
- Low Current (2mA) LEDs
- Surface Mount LEDs
- Mix LED Color Linear Bargraphs for OEM Applications

Part Number	Emitted Color	Lens Color/Type	Electrical-Optical Characteristics (Ta = 25°...C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

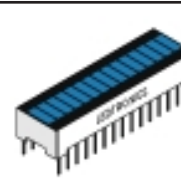
15-LED Super Intensity, Sunlight-Visible Circular Bargraph

	CBG1500E3KB	SP RED		Milky White	20	70	2.0/2.6	633	—	1
	CBG1500Y3KB	SP YELLOW		Milky White	20	70	2.0/2.6	592	—	
	CBG1500AG3KB	AQUA GREEN		Milky White	20	60	3.5/4.0	523	—	
	CBG1500PB1KB	SP BLUE		Milky White	20	14	3.8/4.0	470	—	
	Custom Mixed Color <i>(for qualified applications)</i>									
Part Number Example: CBG1500X3KB-GGGGGGGGYYYYYB										
1) Black face bargraphs are illustrated and listed as Part Numbers.										
2) Grey face bargraphs are available. When ordering grey, remove the last "B" from the Part Number in this table's left column.										
										

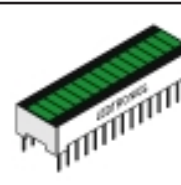
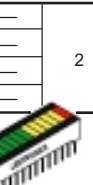
15-LED Standard Intensity Circular Bargraph

	CBG1500R6B	UL RED		Milky White	10	8.0	1.7/2.5	660	—	1
	CBG1500R3B	HE RED		Milky White	10	5.0	1.9/2.5	635	—	
	CBG1500Y3B	YELLOW		Milky White	10	4.5	2.0/2.5	585	—	
	CBG1500G3B	HE GREEN		Milky White	10	5.0	2.1/2.5	565	—	
	Custom Mixed Color <i>(for qualified applications)</i>									
Part Number Example: CBG1500T3-9G5Y1R 1) Black face bargraphs are illustrated and listed as Part Numbers. 2) Grey face bargraphs are available. When ordering grey, remove the last "B" from the Part Number in this table's left column.										

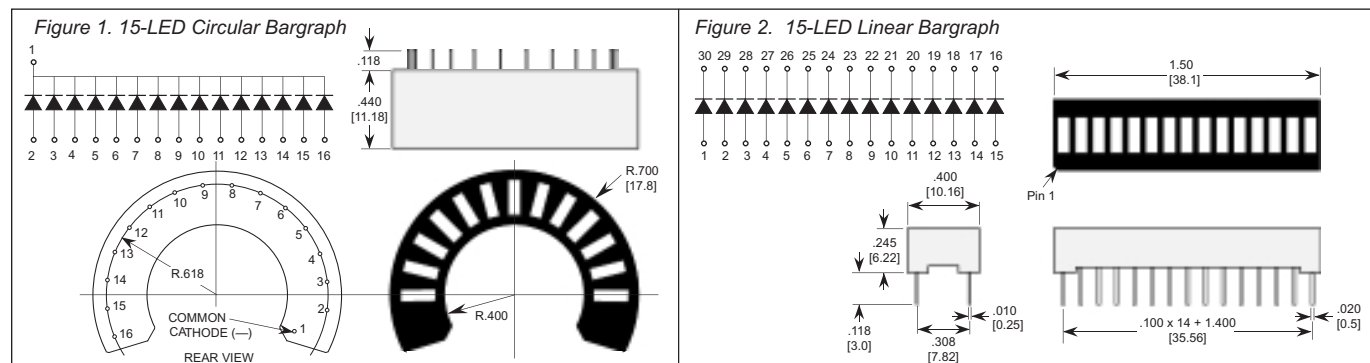
15-LED Super Intensity, Sunlight-Visible Linear Bargraph

	LBG1500E3KB	SP RED	●	Milky White	20	70	2.0/2.6	633	—	2
	LBG1500Y3KB	YELLOW	●	Milky White	20	70	2.0/2.6	592	—	
	LBG1500AG3KB	AQUA GREEN	●	Milky White	20	60	3.5/4.0	523	—	
	LBG1500PB1KB	SP BLUE	●	Milky White	20	14	3.8/4.0	470	—	
	Custom Mixed Color (for qualified applications) Part Number Example: CBG1500X3KB-GGGGGGGGYYYYYB 1) Black face bargraphs are illustrated and listed as Part Numbers. 2) Grey face bargraphs are available. When ordering grey, remove the last "B" from the Part Number in this table's left column.									

15-LED Standard Intensity Linear Bargraph

	LBG1500R6B	UL RED		Milky White	10	8.0	1.7/2.5	660	—	2
	LBG1500R3B	HE RED		Milky White	10	5.0	1.9/2.5	635	—	
	LBG1500Y3B	YELLOW		Milky White	10	4.5	2.0/2.5	585	—	
	LBG1500G3B	HE GREEN		Milky White	10	5.0	2.1/2.5	565	—	
	Custom Mixed Color (for qualified applications)									
Part Number Example: CBG1500T3-9G5Y1R										
1) Black face bargraphs are illustrated and listed as Part Numbers.										
2) Grey face bargraphs are available. When ordering grey, remove the last "B" from the Part Number in this table's left column.										
										

Custom Options: OEM large quantity requirements



5 & 10-LED (1.8x5mm) Linear Bargraphs

Part Number	Emitted Color	Lens Color/ Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _F (mA)	I _V (mcd) typ	V _F (V) typ/max	λ _D (nm)		

5-LED Super Intensity , Sunlight-V isible Linear Bargraph

	LBG0500E3KB	SP RED		Milky White	20	70	2.0/2.6	633	—	1
	LBG0500Y3KB	SP YELLOW		Milky White	20	70	2.0/2.6	592	—	
	LBG0500G3KB	AQUA GREEN		Milky White	20	60	3.5/4.0	523	—	
	LBG0500PB1KB	SP BLUE		Milky White	20	14	3.8/4.0	470	—	
	Custom Mixed Color (for qualified applications) Part Number Example: LBG0500TX3KB-GGGYB 1) Black face bargraphs are illustrated and listed as Part Numbers. 2) Grey face bargraphs are available. When ordering grey, remove the last "B" from the Part Number in this table's left column.									

5-LED Standard Intensity Linear Bargraph

	LBG0500R6B	UL RED		Milky White	10	8.0	1.7/2.5	660	—	1
	LBG0500R3BL	HE RED		Milky White	10	5.0	1.9/2.5	635	—	
	LBG0500Y3B	YELLOW		Milky White	10	4.5	2.0/2.5	585	—	
	LBG0500G3B	HE GREEN		Milky White	10	5.0	2.1/2.5	565	—	
	Custom Mixed Color (for qualified applications) Part Number Example: LBG0500T3-3G1Y1R 1) Black face bargraphs are illustrated and listed as Part Numbers. 2) Grey face bargraphs are available. When ordering grey, remove the last "B" from the Part Number in this table's left column.									

10-LED Super Intensity , Sunlight-V isible Linear Bargraph

	LBG1000E3KB	SP RED		Milky White	20	70	2.0/2.6	633	—	2
	LBG1000Y3KB	SP YELLOW		Milky White	20	70	2.0/2.6	592	—	
	LBG1000G3KB	AQUA GREEN		Milky White	20	60	3.5/4.0	523	—	
	LBG1000PB1KB	SP BLUE		Milky White	20	14	3.8/4.0	470	—	
	Custom Mixed Color (for qualified applications) Part Number Example: LBG1000TX3KB-GGGGGGGYB 1) Black face bargraphs are illustrated and listed as Part Numbers. 2) Grey face bargraphs are available. When ordering grey, remove the last "B" from the Part Number in this table's left column.									

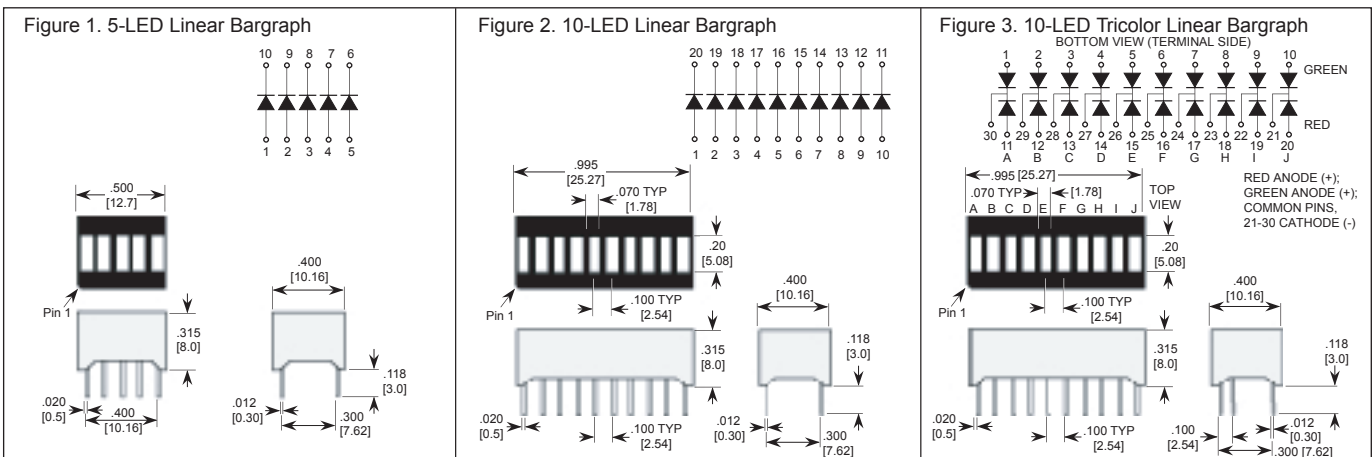
10-LED Standard Intensity Linear Bargraph

	LBG1000R6B	UL RED		Milky White	10	8.0	1.7/2.5	660	—	2
	LBG1000R3B	HE RED		Milky White	10	5.0	1.9/2.5	635	—	
	LBG1000Y3B	YELLOW		Milky White	10	4.5	2.0/2.5	585	—	
	LBG1000PB1KB	HE GREEN		Milky White	10	5.0	2.1/2.5	565	—	
	Custom Mixed Color (for qualified applications) Part Number Example: LBG1000T3-7G2Y1R 1) Black face bargraphs are illustrated and listed as Part Numbers. 2) Grey face bargraphs are available. When ordering grey, remove the last "B" from the Part Number in this table's left column.									

10-LED Tricolor (HE Red/Green) Linear Bargraph

	LBG1000RG3B	HE RED		Milky White	10	4.8	1.9/2.5	635	—	3
		HE GREEN			10	4.8	2.1/2.5	568	—	
	 1) Black face bargraphs are illustrated and listed as Part Numbers. 2) Grey face bargraphs are available. When ordering grey, remove the last "B" from the Part Number in this table's left column.									

Custom Options: OEM large quantity requirements





Vertical Modular (1.8x5mm) LED Bargraphs

Features

- Two, Three and Five-LED Modules Snap Together to Form the Desired Configurations
- Solid-State, High Shock/Vibration Resistant
- Fast Turn On/Off Time
- Three-Year Warranty
- LED Operating Life: 100,000+ hours (10+ years)
- Available in Standard and Special Colors
- Available in White or Black Housings
- Available in Custom Configurations

Applications

- Instrument Panels
- PCB Mounted Status Panel Indicator
- Indicators for Telecom/Data Comm/Networking Products

Custom Options

(for qualified applications)

- Bicolor/Tricolor LEDs
- Sunlight Visible LEDs
- Low Current 2mA LEDs
- Resistorless LEDs
- Surface Mount
- White Housing

Part Number	Emitted Color	Lens Color/Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

2-LED Vertical Mount Bargraph

	LBG280T3-2R-B	HE RED	RED Diffused	20	5.0	2.0/3.0	635	125°	1
	LBG280T3-2Y-B	YELLOW	YEL Diffused	20	7.6	2.2/3.0	585	125°	
	LBG280T3-2G-B	HE GREEN	GRN Diffused	20	7.6	2.2/3.0	565	125°	

3-LED Vertical Mount Bargraph

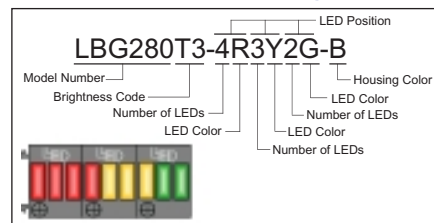
	LBG280T3-3R-B	HE RED	RED Diffused	20	5.0	2.0/3.0	635	125°	2
	LBG280T3-3Y-B	YELLOW	YEL Diffused	20	7.6	2.2/3.0	585	125°	
	LBG280T3-3G-B	HE GREEN	GRN Diffused	20	7.6	2.2/3.0	565	125°	

5-LED Vertical Mount Bargraph

	LBG280T3-5R-B	HE RED	RED Diffused	20	5.0	2.0/3.0	635	125°	3
	LBG280T3-5Y-B	YELLOW	YEL Diffused	20	7.6	2.2/3.0	585	125°	
	LBG280T3-5G-B	HE GREEN	GRN Diffused	20	7.6	2.2/3.0	565	125°	

Custom Options: OEM large quantity requirements

Example of part number ordering code



Interlocking System
Provides Design Flexibility

Figure 1. 2-LED Vertical Mount

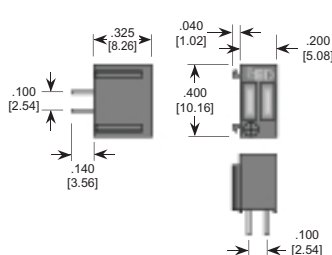


Figure 2. 3-LED Vertical Mount

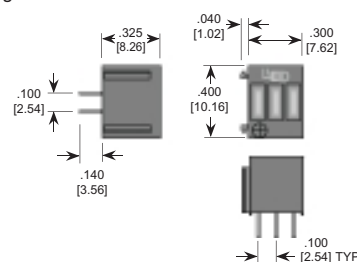
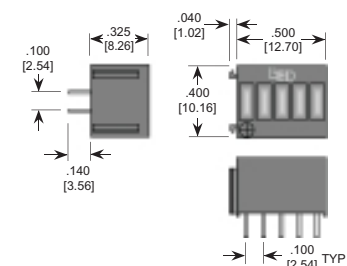


Figure 3. 5-LED Vertical Mount



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Part Number	Emitted Color	Lens Color/ Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

2-LED Right-Angle Mount Bargraph

	RBG280T3-2R-B	HE RED	RED Diffused	20	5.0	2.0/3.0	635	125°	1
	RBG280T3-2Y-B	YELLOW	YEL Diffused	20	7.6	2.2/3.0	585	125°	
	RBG280T3-2G-B	HE GREEN	GRN Diffused	20	7.6	2.2/3.0	565	125°	

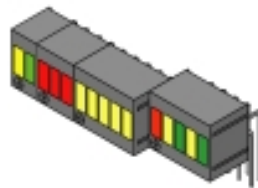
3-LED Right-Angle Mount Bargraph

	RBG280T3-3R-B	HE RED	RED Diffused	20	5.0	2.0/3.0	635	125°	2
	RBG280T3-3Y-B	YELLOW	YEL Diffused	20	7.6	2.2/3.0	585	125°	
	RBG280T3-3G-B	HE GREEN	GRN Diffused	20	7.6	2.2/3.0	565	125°	

5-LED Right-Angle Mount Bargraph

	RBG280T3-5R-B	HE RED	RED Diffused	20	5.0	2.0/3.0	635	125°	3
	RBG280T3-5Y-B	YELLOW	YEL Diffused	20	7.6	2.2/3.0	585	125°	
	RBG280T3-5G-B	HE GREEN	GRN Diffused	20	7.6	2.2/3.0	565	125°	

Custom Options: OEM large quantity requirements



Interlocking System
Provides Design Flexibility

Example of part number ordering code

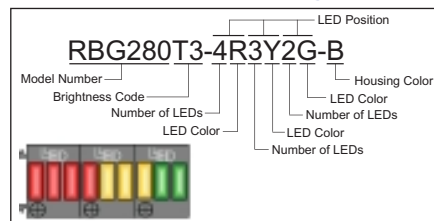


Figure 1. 2-LED Right-Angle Mount

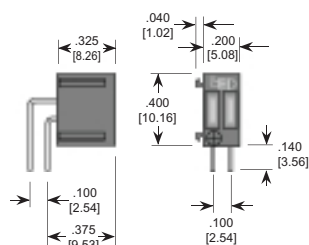


Figure 2. 3-LED Right-Angle Mount

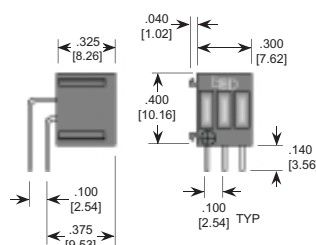
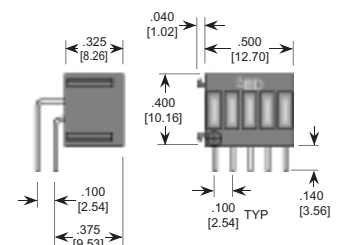


Figure 3. 5-LED Right-Angle Mount



Log # 125D pg5 Rev 07-2001

Part Number	Emitted Color	Lens Color/ Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

2x5mm Right-Angle Indicator LEDs

	RP280R3-140	HE RED	RED Diffused	20	6.3	2.0/2.6	635	125°	1
	RP280Y3-140	YELLOW	YEL Diffused	20	4.3	2.1/2.6	585	125°	
	RP280G3-140	HE GREEN	GRN Diffused	20	4.3	2.2/2.6	568	125°	

2x5mm Right-Angle Indicator LEDs with Tail

	RPT280R3M-140	HE RED	RED Diffused	20	6.3	2.0/2.6	635	125°	2
	RPT280Y3M-140	YELLOW	YEL Diffused	20	4.3	2.1/2.6	585	125°	
	RPT280G3M-140	HE GREEN	GRN Diffused	20	4.3	2.2/2.6	568	125°	

2x5mm Vertical Indicator LEDs

	RPV280R3-140	RED	RED Diffused	20	6.3	2.0/2.6	635	125°	3
	RPV280Y3-140	YELLOW	YEL Diffused	20	4.3	2.1/2.6	585	125°	
	RPV280G3-140	HE GREEN	GRN Diffused	20	4.3	2.2/2.6	568	125°	

Square 5x5mm Right-Angle Indicator LEDs

	SP200R3-140	RED	RED Diffused	10	1.0	2.0/2.8	635	150°	4
	SP200Y3-140	YELLOW	YEL Diffused	10	1.5	2.1/2.8	585	150°	
	SP200G3-140	HE GREEN	GRN Diffused	10	1.3	2.1/2.8	568	150°	

Square 5x5mm Right-Angle Indicator LEDs with Tail

	SPT200R3-140	RED	RED Diffused	10	1.0	2.0/2.8	635	150°	5
	SPT200Y3-140	YELLOW	YEL Diffused	10	1.5	2.1/2.8	585	150°	
	SPT200G3-140	HE GREEN	GRN Diffused	10	1.3	2.1/2.8	568	150°	

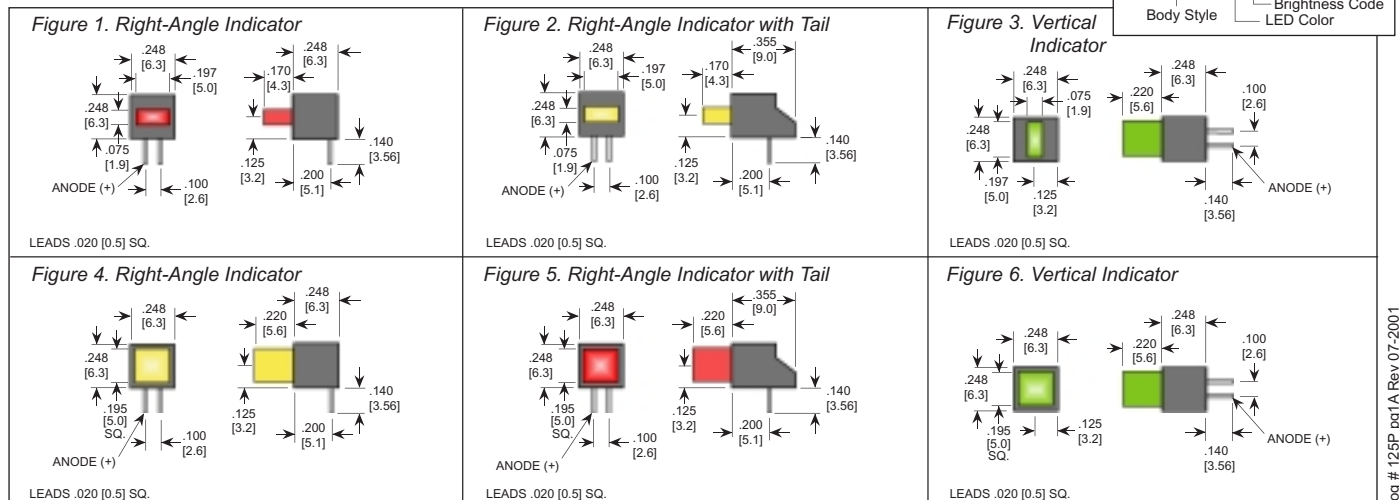
Square 5x5mm Vertical Indicator LEDs

	SPV200R3-140	RED	RED Diffused	10	1.0	2.0/2.8	635	150°	6
	SPV200Y3-140	YELLOW	YEL Diffused	10	1.5	2.1/2.8	585	150°	
	SPV200G3-140	HE GREEN	GRN Diffused	10	1.3	2.1/2.8	568	150°	

Custom Options: OEM large quantity requirements

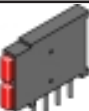
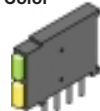
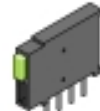
Part number code for
additional combinations

Sample Part Number:	SPV200R3-140
Body Style	Short Lead
Brightness Code	
LED Color	

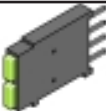
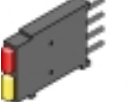
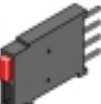
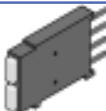


Part Number	Emitted Color	Lens Color/Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

Right-Angle Indicator LEDs

Same Color 	21RP070TR3		HE RED		RED Diffused	20	4.0	2.0/2.6	635	125°
	21RP070TY3		YELLOW		YEL Diffused	20	3.6	2.1/2.6	585	125°
	21RP070TG3		HE GREEN		GRN Diffused	20	5.0	2.2/2.6	568	125°
	21RP070TUB5		UL BLUE		BLU Diffused	20	24.0	5.0/5.5	430	125°
Mix Color   1 Blank Space	Part Number Example: Mix Color 21RP070T3-G/Y (Green top, Yellow bottom) ▶ 21RP070T3-G/Y No. of LEDs Across No. of LEDs High Body Style Bottom Color Top Color Brightness Code Lens Type: T= Diffused									
	21RP070T3-G/x (Green top, Blank bottom)									
Bicolor 	21RP070TWRG4B		HE RED		WHT Diffused	20	5.0	2.0/2.6	635	125°
			HE GREEN			20	10.0	2.2/2.6	568	125°
	21RP070TWYG4B		YELLOW		WHT Diffused	20	7.0	2.1/2.6	585	125°
			HE GREEN			20	8.0	2.2/2.6	568	125°

Vertical Indicator LEDs

	21RPV070TR3	HE RED		RED Diffused	20	4.0	2.0/2.6	635	125°
	21RPV070TY3	YELLOW		YEL Diffused	20	3.6	2.1/2.6	585	125°
	21RPV070TG3	HE GREEN		GRN Diffused	20	5.0	2.2/2.6	568	125°
	21RPV070TUB5	UL BLUE		BLU Diffused	20	24.0	5.0/5.5	430	125°
  1 Blank Space	Part Number Example: Mix Color 21RPV070T3-R/Y (Red top and Yellow bottom) Part Number Example: 1 Blank Space 21RPV070T3-R/x (Red top, Blank bottom) 21RPV070T3-R/Y No. of LEDs Across No. of LEDs High Body Style Bottom Color Top Color Brightness Code Lens Type: T= Diffused								
		21RPV070TWRG4B	HE RED		WHT Diffused	20	5.0	2.0/2.6	635
HE GREEN				20		10.0	2.2/2.6	568	125°
21RPV070TWYG4B		YELLOW		WHT Diffused	20	7.0	2.1/2.6	585	125°
		HE GREEN			20	8.0	2.2/2.6	568	125°

Custom Options: OEM large quantity requirements

1. Single or Mix Color Arrays
2. Sunlight Visible Diffused Illuminator, Wide Angle
3. Other Colors Available
4. Reversed Color Polarity Configurations Available

Arrayable Design

Custom Options
(for qualified applications)

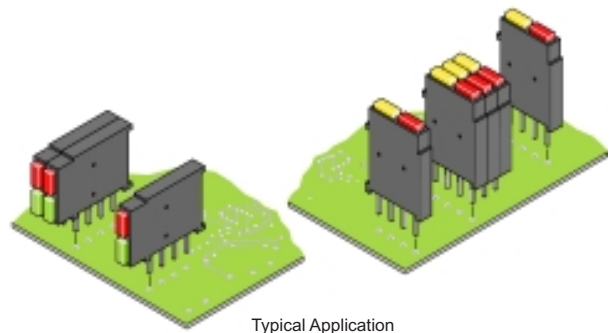
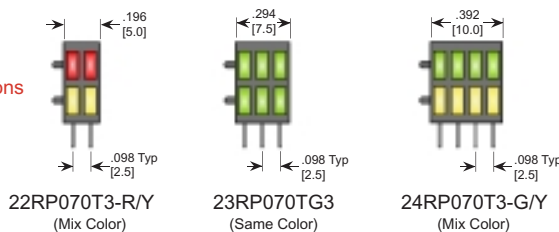


Figure 1. Right-Angle Indicator LEDs

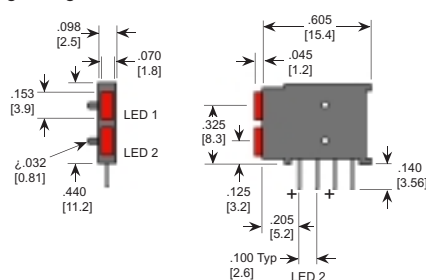
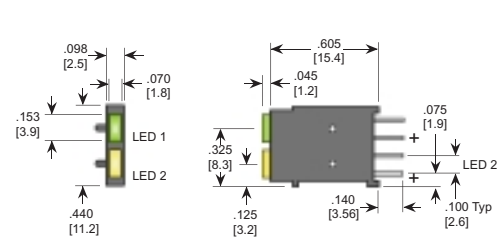


Figure 2. Vertical Indicator LEDs



**Features**

- Transmit/Receive, Link Status View at Each Port
- Two-Position Single or Bicolor Combinations
- Arrayable Design
- Mounting Tabs for Easy PCB Placement
- High On/Off Contrast
- Each LED Shielded from Adjacent LEDs
- Co-Planar Alignment for Easy Panel Mounting
- Improves Panel Aesthetics
- High Intensity/Low Power
- Fast Turn On/Off Time I.C. Compatible

Applications

- Modems
- Status Indicators Transmit/Receive Link
- Telecommunications
- LAN Applications in Adapter Cards & Routers
- Telecom Switches, Data Comm Bridges/Routers

Custom Options

(for qualified applications)

- Super Bright LEDs
- Special Bicolor LEDs
- Choice of Other Colors
- Clear Lens LEDs
- 5/12V Integrated LEDs
- Blinking LEDs

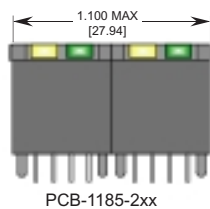
Part Number	Emitted Color	Lens Color/Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

1.8 x 3.8mm Rectangular Low Profile LEDs

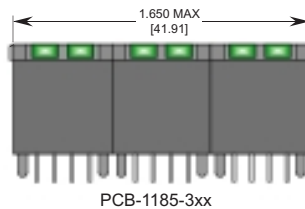
	PCB-1185-122	HE RED	RED Diffused	20	6.6	2.0/2.6	635	120°	1
	PCB-1185-144	YELLOW	YEL Diffused	20	6.0	2.1/2.6	585	120°	
	PCB-1185-166	HE GREEN	GRN Diffused	20	8.0	2.2/2.6	568	120°	
	PCB-1185-1RG	HE RED	WHT Diffused	20	5.0	2.0/2.6	635	120°	
		HE GREEN		20	8.0	2.2/2.6	568	120°	
	PCB-1185-1YG	YELLOW	WHT Diffused	20	7.0	2.1/2.6	585	120°	
		HE GREEN		20	10.0	2.2/2.6	568	120°	

Custom Options: OEM large quantity requirements**Arrayable Design**

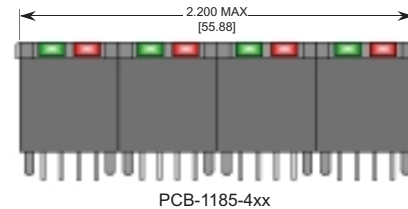
Custom Options (for qualified applications)



PCB-1185-2xx



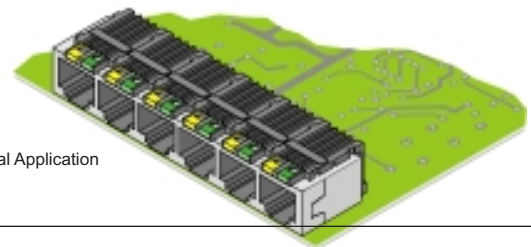
PCB-1185-3xx



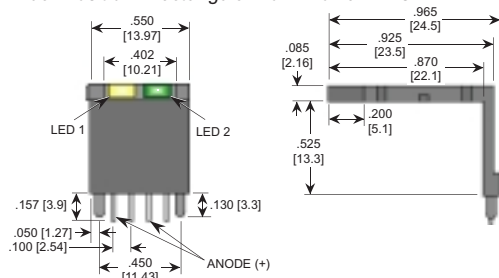
PCB-1185-4xx

Part number code for additional combinations

For units with two LEDs	Color code
PCB-1185-x x x	1 UL RED
Number of arrayed units	2 HE RED
Color of LED 1	3 ORANGE
Color of LED 2	4 YELLOW
Bicolor option	6 HE GREEN
For units with mixed bicolor LEDs, consult LEDtronics for a part number	7 P GREEN



Typical Application

Figure 1. Dual-Position Rectangular Low Profile LEDs

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Part Number	Emitted Color	Lens Color/ Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

2 x 5mm Dual-Position, Rectangular Diffused LEDs

	PCB-1201-122	HE RED	RED Diffused	20	6.3	2.0/2.6	635	125°	1
	PCB-1201-144	YELLOW	YEL Diffused	20	4.3	2.1/2.6	585	125°	
	PCB-1201-166	HE GREEN	GRN Diffused	20	4.3	2.2/2.6	568	125°	
	PCB-1201-1RG	HE RED	WHT Diffused	20	4.5	2.0/2.6	635	125°	
		HE GREEN		20	5.0	2.2/2.6	565	125°	
	PCB-1201-1YG	YELLOW	WHT Diffused	20	4.0	2.1/2.6	585	125°	
		HE GREEN		20	5.0	2.2/2.6	568	125°	

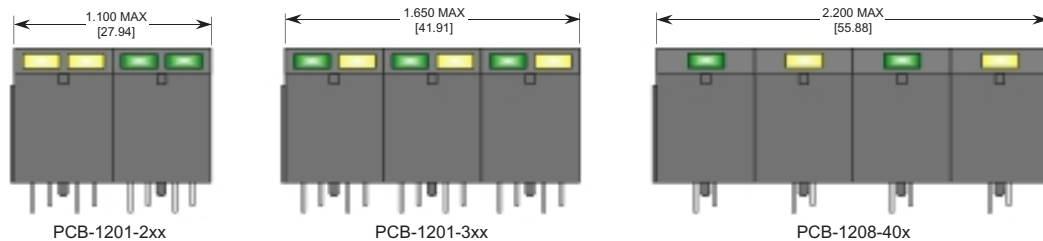
2 x 5mm Single-Position, Rectangular Diffused LEDs

	PCB-1208-102	HE RED	RED Diffused	20	6.3	2.0/2.6	635	125°	2
	PCB-1208-104	YELLOW	YEL Diffused	20	4.3	2.1/2.6	585	125°	
	PCB-1208-106	HE GREEN	GRN Diffused	20	4.3	2.2/2.6	568	125°	
	PCB-1208-1RG	HE RED	WHT Diffused	20	4.5	2.0/2.6	635	125°	
		HE GREEN		20	5.0	2.2/2.6	565	125°	
	PCB-1208-1YG	YELLOW	WHT Diffused	20	4.0	2.1/2.6	585	125°	
		HE GREEN		20	5.0	2.2/2.6	568	125°	

Custom Options: OEM large quantity requirements

Arrayable Design

Custom Options (for qualified applications)



Part number code for additional combinations

For units with two LEDs	Color code
PCB-1201-x x x	1 UL RED
Number of arrayed units	2 HE RED
Color of LED 1	3 ORANGE
Color of LED 2	4 YELLOW
Bicolor option	6 HE GREEN
For units with mixed bicolor LEDs, consult LEDtronics for a part number	7 P GREEN

Part number code for additional combinations

For units with one LED	Color code
PCB-1208-x x x	1 UL RED
Number of arrayed units	2 HE RED
Color of LED	3 ORANGE
Bicolor option	4 YELLOW
	6 HE GREEN
	7 P GREEN

Figure 1. Dual-Position Rectangular LEDs

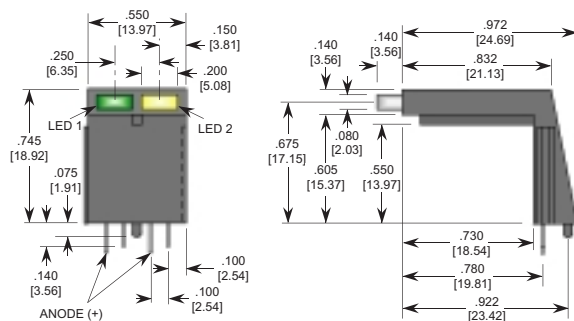
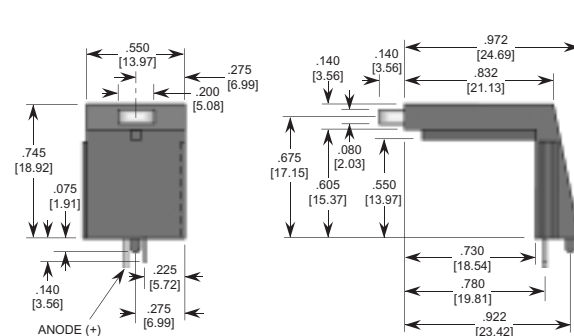


Figure 2. Single-Position Rectangular LED



Log # 125F pg2 Rev 07-2001

Part Number	Emitted Color	Lens Color/ Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

3mm Single-Position, Standard Dome LEDs

	PCB-1209-102	HE RED	RED Diffused	20	32.0	2.0/2.6	635	55°	1
	PCB-1209-104	YELLOW	YEL Diffused	20	29.0	2.0/2.6	585	55°	
	PCB-1209-106	HE GREEN	GRN Diffused	20	50.0	2.2/2.6	568	55°	
	PCB-1209-1RG	HE RED	WHT Diffused	20	5.5	2.0/2.6	635	55°	
		HE GREEN		20	10.0	2.2/2.6	568	55°	
	PCB-1209-1YG	YELLOW	WHT Diffused	20	4.5	2.1/2.6	585	55°	
		HE GREEN		20	8.0	2.2/2.6	568	55°	

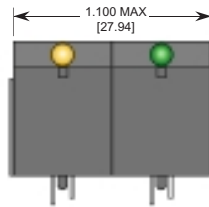
3mm Single-Position, Standard Dome w/Franged LEDs

	PCB-1209-102-01	HE RED	RED Diffused	20	32.0	2.0/2.6	635	40°	2
	PCB-1209-104-01	YELLOW	YEL Diffused	20	42.0	2.1/2.6	585	40°	
	PCB-1209-106-01	HE GREEN	GRN Diffused	20	45.0	2.2/2.6	568	40°	
	PCB-1209-1RG-01	HE RED	WHT Diffused	20	5.5	2.0/2.6	635	40°	
		HE GREEN		20	10.0	2.2/2.6	568	40°	
	PCB-1209-1YG-01	YELLOW	WHT Diffused	20	4.5	2.1/2.6	585	40°	
		HE GREEN		20	8.0	2.2/2.6	568	40°	

Custom Options: OEM large quantity requirements

Arrayable Design

Custom Options (for qualified applications)



PCB-1209-20x



Typical Application

Part number code for additional combinations

For units with one LED	Color code
PCB-1209-x x x	1 UL RED
Number of arrayed units	2 HE RED
Color of LED	3 ORANGE
Bicolor option	4 YELLOW
	6 HE GREEN
	7 P GREEN

Part number code for additional combinations

For units with one LED	Color code
PCB-1209-x x x-01	1 UL RED
Number of arrayed units	2 HE RED
Color of LED	3 ORANGE
Bicolor option	4 YELLOW
Narrower 40° beam option (2q _{1/2})	6 HE GREEN
	7 P GREEN

Figure 1. Single-Position, Dome LED

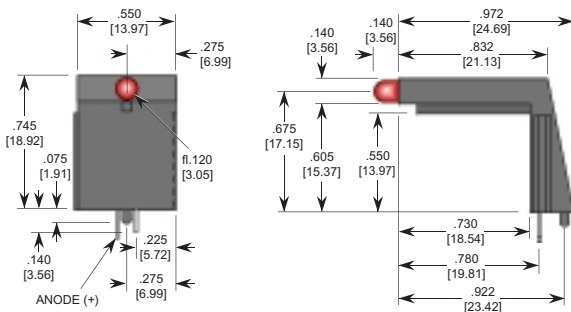
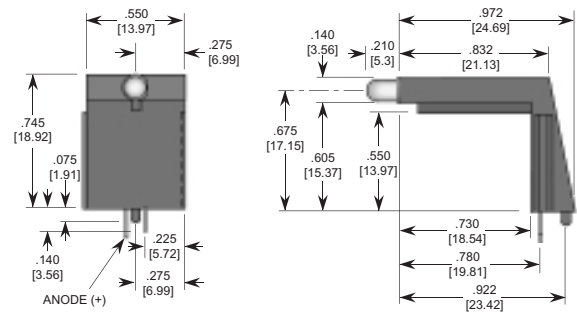


Figure 2. Single-Position, Dome w/Franged LED



Part Number	Emitted Color	Lens Color/ Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2 $\theta_{1/2}$	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ_p (nm)		

3mm Dual-Position, Standard Dome LEDs

	PCB-1202-122	HE RED	RED Diffused	20	32.0	2.0/2.6	635	55°	1
	PCB-1202-144	YELLOW	YEL Diffused	20	29.0	2.0/2.6	585	55°	
	PCB-1202-166	HE GREEN	GRN Diffused	20	50.0	2.2/2.6	568	55°	
	PCB-1202-1RG	HE RED	WHT Diffused	20	5.5	2.0/2.6	635	55°	
		HE GREEN		20	10.0	2.2/2.6	568	55°	
	PCB-1202-1YG	YELLOW	WHT Diffused	20	4.5	2.1/2.6	585	55°	
		HE GREEN		20	8.0	2.2/2.6	568	55°	

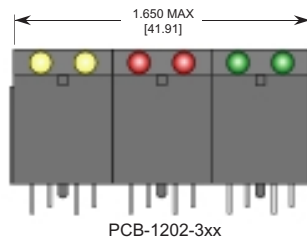
3mm Dual-Position, Standard Dome w/Franged LEDs

	PCB-1202-122-01	HE RED	RED Diffused	20	32.0	2.0/2.6	635	40°	2
	PCB-1202-144-01	YELLOW	YEL Diffused	20	42.0	2.1/2.6	585	40°	
	PCB-1202-166-01	HE GREEN	GRN Diffused	20	45.0	2.2/2.6	565	40°	
	PCB-1202-1RG-01	HE RED	WHT Diffused	20	5.5	2.0/2.6	635	40°	
		HE GREEN		20	10.0	2.2/2.6	565	40°	
	PCB-1202-1YG-01	YELLOW	WHT Diffused	20	4.5	2.1/2.6	585	40°	
		HE GREEN		20	8.0	2.2/2.6	565	40°	

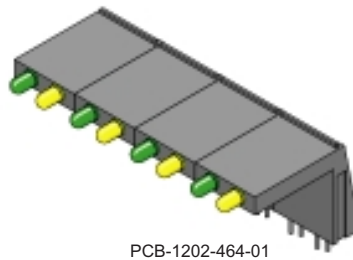
Custom Options: OEM large quantity requirements

Arrayable Design

Custom Options (for qualified applications)



PCB-1202-3xx



PCB-1202-464-01



Typical Application

Part number code for additional combinations

For units with two LEDs		Color code	
PCB-1202-xxxx		1	UL RED
Number of arrayed units		2	HE RED
Color of LED 1		3	ORANGE
Color of LED 2		4	YELLOW
Bicolor option		6	HE GREEN
For units with mixed bicolor LEDs, consult LEDtronics for a part number		7	P GREEN

Part number code for additional combinations

For units with two LEDs		Color code	
PCB-1202-xxxx-01		1	UL RED
Number of arrayed units		2	HE RED
Color of LED 1		3	ORANGE
Color of LED 2		4	YELLOW
Bicolor option		6	HE GREEN
Narrower 40° beam option (2 $\theta_{1/2}$)		7	P GREEN
For units with mixed bicolor LEDs, consult LEDtronics for a part number			

Figure 1. Dual-Position, Dome LEDs

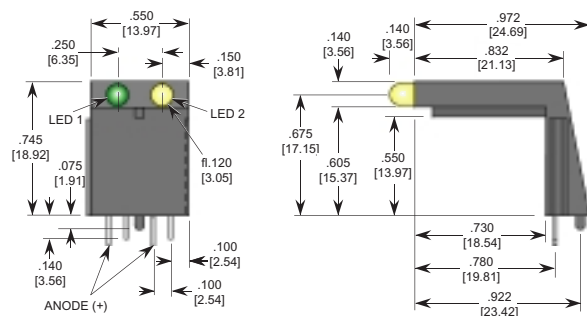
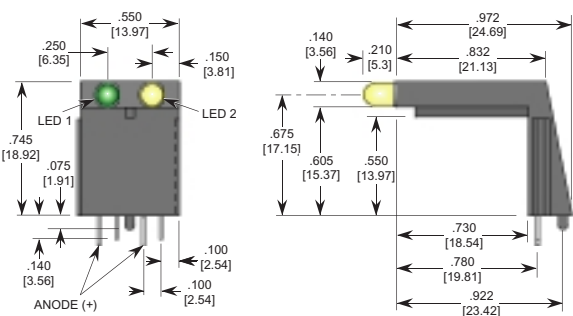


Figure 2. Dual-Position, Dome w/Franged LEDs





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Applications

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- Telecom, Datacom
- Routers, Servers

Custom Options

(for qualified applications)

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- Low Current (2mA) LEDs
- Clear Lens Illuminators
- Special Bicolors
- Integrated Resistor
- Blinking
- On-Board Custom Circuits

Part Number	Emitted Color	Lens Color/Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2θ _{1/2}	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ _p (nm)		

Single & Bicolor Multi-LED Right-Angle Illumination

Series CLD228

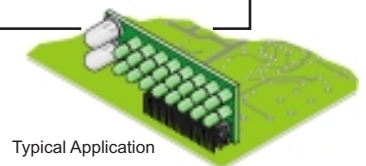
CLD228-RG-002	RED/GRN		Milky White	20	15	1.9/2.4	635	150°	1	
	RED		RED Diffused	20	25	2.1/2.7	568	150°		
	CLD228-RG-004	RED/GRN		Milky White	20	15	1.9/2.4	635		150°
		YELLOW		YEL Diffused	20	25	2.1/2.7	568		150°
	CLD228-RG-006	RED/GRN		Milky White	20	15	1.9/2.4	635		150°
		GREEN		GRN Diffused	20	25	2.1/2.7	568		150°
	Custom Color Configuration (for qualified applications) Part Number Example: CLD228-RG-1R2Y5G									

Single & Bicolor Multi-LED Right-Angle Illumination

Series CLD248

CLD248-RG-002 CLD248-RG-004 CLD248-RG-006	RED/GRN		Milky White	20	15	1.9/2.4	635	150°	2
	RED		RED Diffused	20	25	2.1/2.7	568	150°	
	RED/GRN		Milky White	20	15	1.9/2.4	635	150°	
	YELLOW		YEL Diffused	20	25	2.1/2.7	568	150°	
	RED/GRN		Milky White	20	15	1.9/2.4	635	150°	
	GREEN		GRN Diffused	20	25	2.1/2.7	568	150°	
	Custom Color Configuration (for qualified applications)								
	Part Number Example: CLD248-RG-1R2Y5G								

Custom Options: OEM large quantity requirements



Typical Application

Figure 1. Series CLD228 Multi-LED

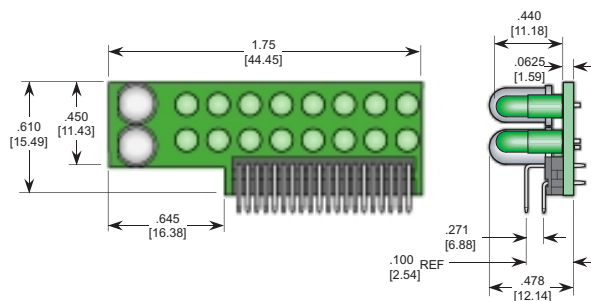
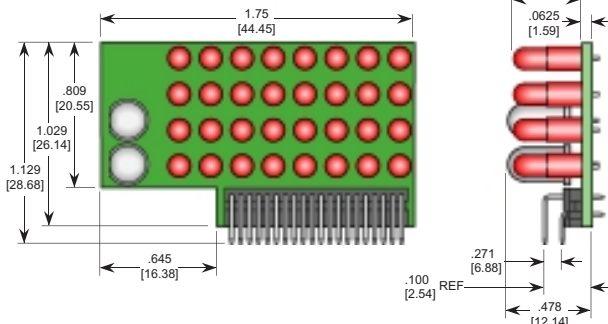
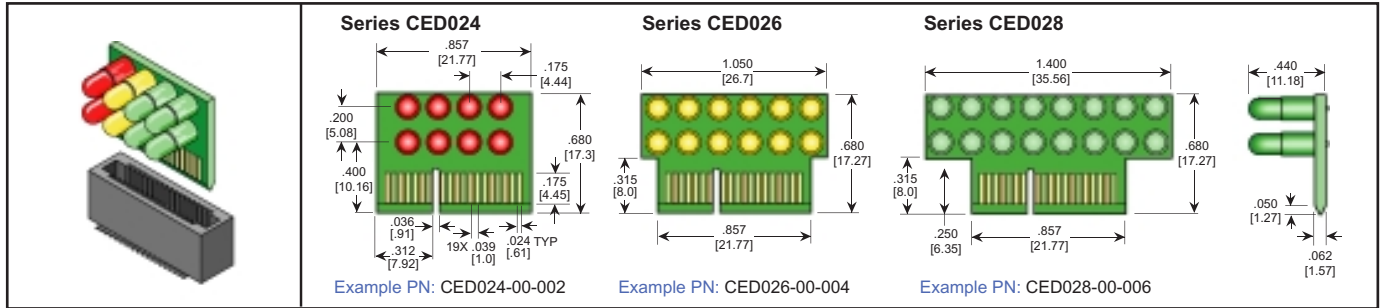


Figure 2. Series CLD248 Multi-LED

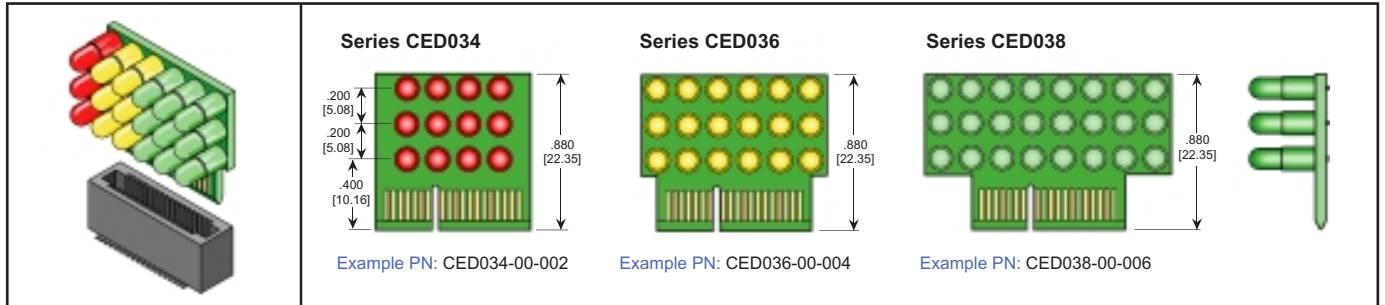


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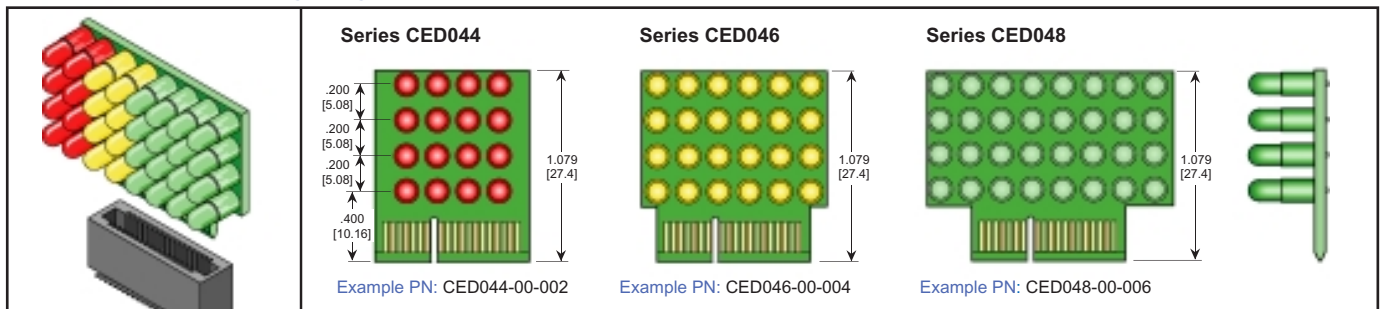
3mm Bi-Level Multi-LED Right-Angle Illumination



3mm Tri-Level Multi-LED Right-Angle Illumination

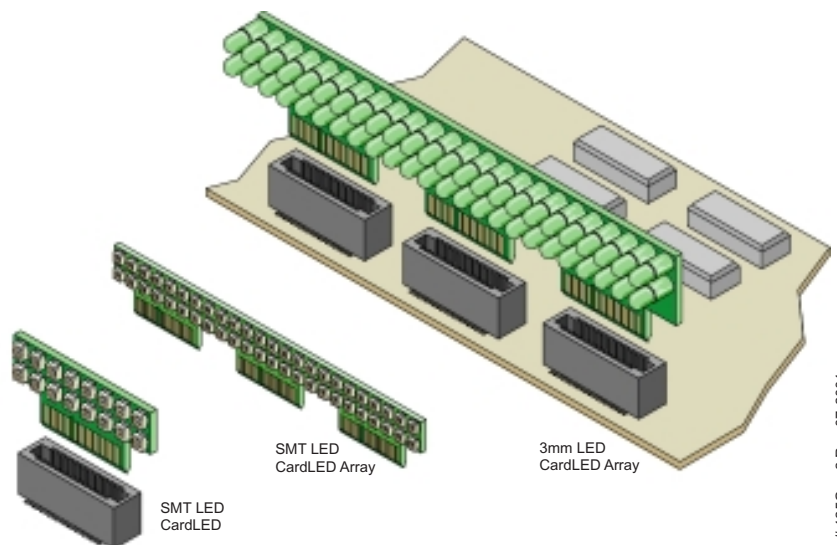
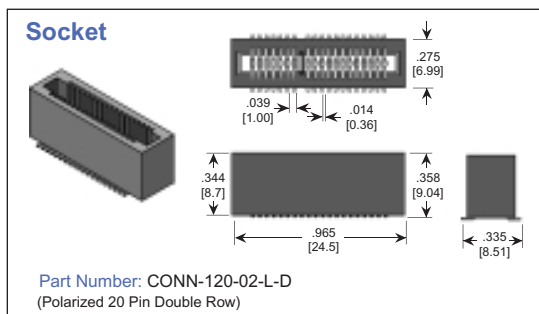


3mm Quad-Level Multi-LED Right-Angle Illumination



Custom Options: OEM large quantity requirements

Example of Custom Packages (for qualified applications)





Edgelight (2x9mm) Right-Angled LED Illuminators

Features

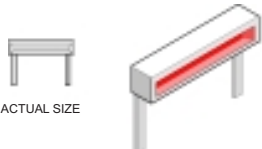
- Dual-Chip, Wide-Angle, Low-Profile LEDs
- Solid-State, High Shock/Vibration Resistant
- IC Compatible
- LED Operating Life: 100,000+ hours (10+ years)
- Fast Turn On/Off Time (in Nanoseconds)
- Choice of 10 Sunlight Visible Colors Plus Infrared
- Very Low Power Consumption
- Super Intensity
- Even Illumination Over a Wide Area
- New LED Chip Technology: InGaN, InGaAlP
- Three-Year Warranty

Applications

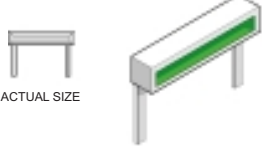
- Edge-Lit LCDs
- Display Screen Illumination on Portable Handheld Devices
- Digital and VU Meter Readout Illumination
- Audio/Video Meter Face Illumination
- Cosmetic/Accent Lighting

Part Number	Emitted Color	Lens Color/Type	Electrical-Optical Characteristics (Ta = 25°C)				View Angle 2 $\theta_{1/2}$	Figure
			I _f (mA)	I _v (mcd) typ	V _f (V) typ/max	λ_p (nm)		

Ultra Sunlight Visible, Dual Chip, Right-Angle LEDs

 ACTUAL SIZE	RAB362R3K	UL RED *	Water-Clear	20	80	4.0/5.2	660	120°	1
	RAB362E3K	SP RED	Water-Clear	20	140	4.4/5.2	630	120°	
	RAB362O3K	SP ORANGE	Water-Clear	20	120	4.4/5.2	611	120°	
	RAB362Y3K	SP YELLOW	Water-Clear	20	80	4.8/5.6	595	120°	
	RAB362G1K	SP GREEN	Water-Clear	20	60	4.8/5.6	574	120°	
	RAB362AG3K	AQUA GREEN	Water-Clear	20	45	7.0/8.0	525	120°	
	RAB362B2K	SP BLUE	Water-Clear	20	40	7.0/8.0	470	120°	

Standard Intensity, Dual Chip, Right-Angle LEDs

 ACTUAL SIZE	RAB362R6	UL RED	Water-Clear	25	76.0	3.4/4.0	660	120°	1
	RAB362R3	HE RED	Water-Clear	25	12.5	4.2/6.0	635	120°	
	RAB362Y3	YELLOW	Water-Clear	25	10.0	4.2/6.0	585	120°	
	RAB362G3	HE GREEN	Water-Clear	25	11.0	4.2/6.0	567	120°	

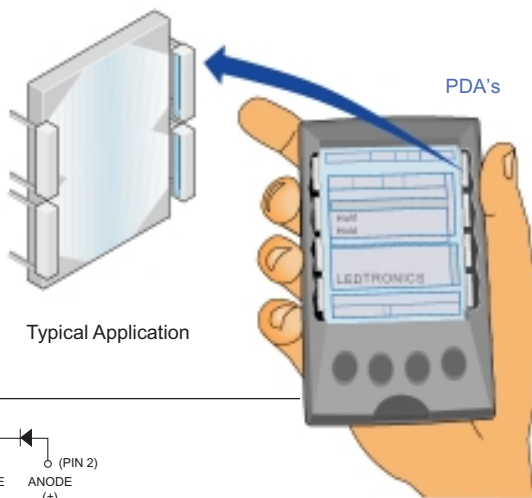
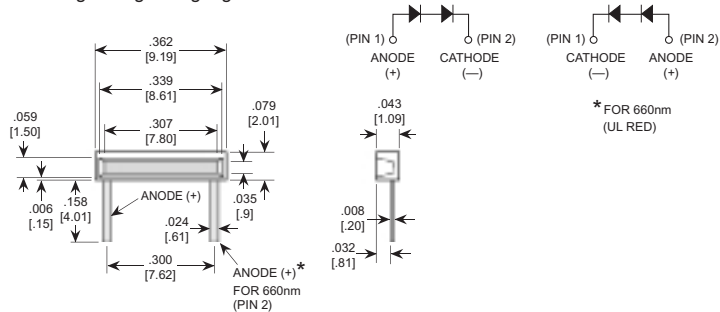
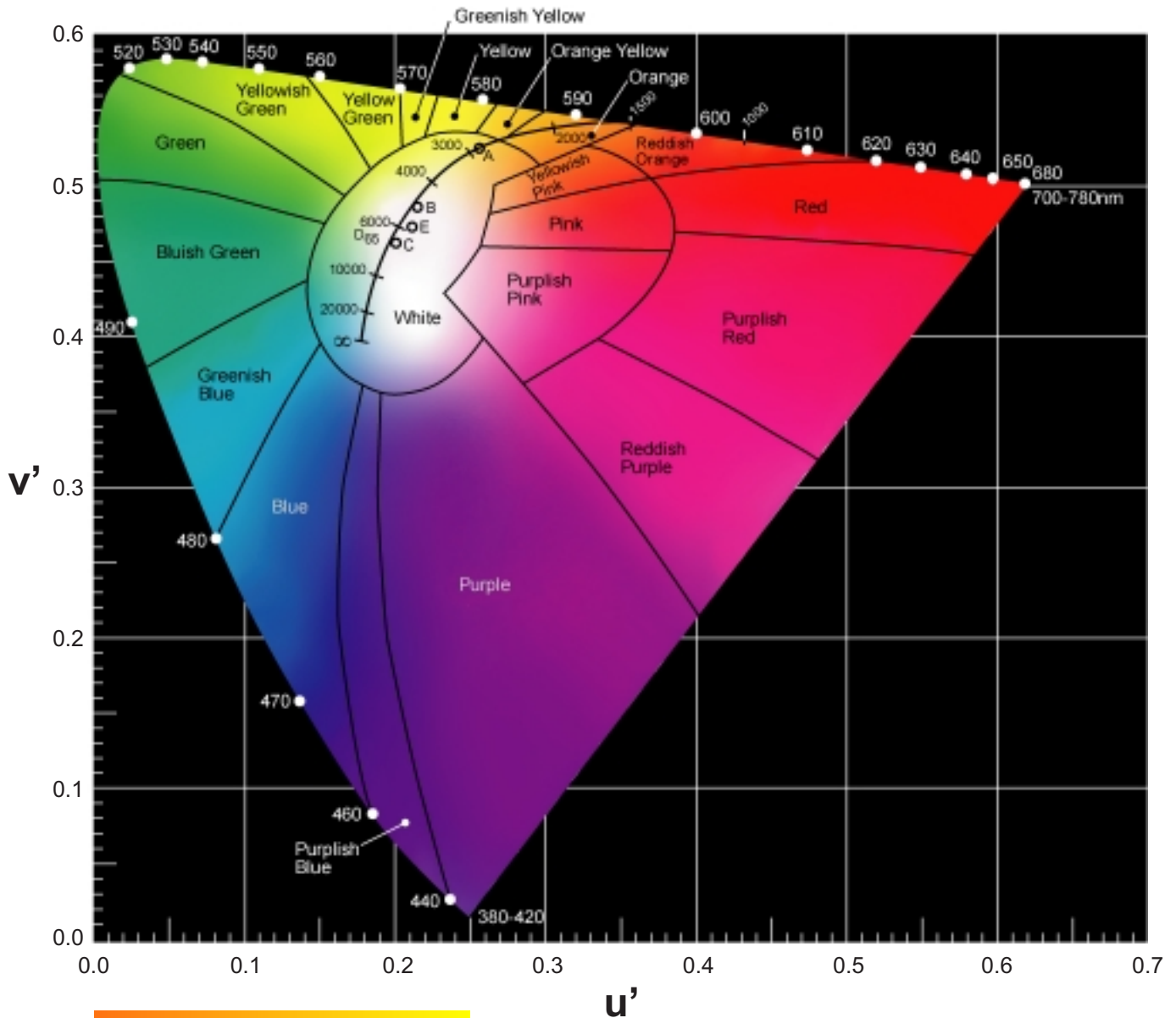


Figure 1. Right-Angle Edgelight LEDs



LEDtronics Code	LED Chip Code	Wavelength nm	Color Name	Fwd Voltage V_f @ 20mA	Intensity 5mm LEDs	Viewing Angle	LED Dye Material
941	 IR941	940	Infrared	1.5	16mW @ 50mA	15°	GaAlAs/GaAs - Gallium Aluminum Arsenide/Gallium Arsenide
881	 IR881	880	Infrared	1.7	18mW @ 50mA	15°	GaAlAs/GaAs - Gallium Aluminum Arsenide/Gallium Arsenide
851	 IR851	850	Infrared	1.7	26mW @ 50mA	15°	GaAlAs/GaAlAs - Gallium Aluminum Arsenide/Gallium Aluminum Arsenide
0UR	 R3KF	660	Ultra Red	2.0	2000mcd @ 20mA	15°	GaAlAs/GaAlAs - Gallium Aluminum Arsenide/Gallium Aluminum Arsenide
00R	 R3/R4/R5	635	High Eff. Red	2.0	200mcd @ 20mA	15°	GaAsP/GaP - Gallium Arsenic Phosphide/Gallium Phosphide
0ER	 E4K	633	Super Red	2.2	4200mcd @ 20mA	22°	InGaAlP - Indium Gallium Aluminum Phosphide
0UO	 O3KF	610	Super Orange	2.2	6500mcd @ 20mA	15°	InGaAlP - Indium Gallium Aluminum Phosphide
00O	 O4/O5	605	Orange	2.1	160mcd @ 20mA	15°	GaAsP/GaP - Gallium Arsenic Phosphide/Gallium Phosphide
0UY	 Y3KF	595	Super Yellow	2.2	3000mcd @ 20mA	15°	InGaAlP - Indium Gallium Aluminum Phosphide
0PY	 Y3KH	592	Super Pure Yellow	2.1	7000mcd @ 20mA	15°	InGaAlP - Indium Gallium Aluminum Phosphide
00Y	 Y3/Y4/Y5	585	Yellow	2.1	100mcd @ 20mA	15°	GaAsP/GaP - Gallium Arsenic Phosphide/Gallium Phosphide
0IW	 IW2K	4500K	Incand White	3.6	2000mcd @ 20mA	20°	SiC/GaN - Silicon Carbide/Gallium Nitride
0PW	 PW4K	6500K	Pale White	3.6	4000mcd @ 20mA	20°	SiC/GaN - Silicon Carbide/Gallium Nitride
0CW	 CW6K	8000K	Cool White	3.6	6000mcd @ 20mA	20°	SiC/GaN - Silicon Carbide/Gallium Nitride
0LY	 LY1K	574	Super Lime Yellow	2.4	1000mcd @ 20mA	15°	InGaAlP - Indium Gallium Aluminum Phosphide
0UG	 G1K	570	Super Lime Green	2.0	1000mcd @ 20mA	15°	InGaAlP - Indium Gallium Aluminum Phosphide
00G	 G3/G4/G5	565	High Eff. Green	2.1	200mcd @ 20mA	15°	GaP/GaP - Gallium Phosphide/Gallium Phosphide
UPG	 PG350	560	Super Pure Green	2.1	350mcd @ 20mA	15°	InGaAlP - Indium Gallium Aluminum Phosphide
0PG	 PG5	555	Pure Green	2.1	80mcd @ 20mA	15°	GaP/GaP - Gallium Phosphide/Gallium Phosphide
0AG	 AG10K	525	Aqua Green	3.5	10,000mcd @ 20mA	15°	SiC/GaN - Silicon Carbide/Gallium Nitride
0BG	 BG2K	505	Blue Green	3.5	2000mcd @ 20mA	45°	SiC/GaN - Silicon Carbide/Gallium Nitride
0PB	 PB3K	470	Super Blue	3.6	3000mcd @ 20mA	15°	SiC/GaN - Silicon Carbide/Gallium Nitride
00B	 UB500	430	Ultra Blue	3.8	100mcd @ 20mA	15°	SiC/GaN - Silicon Carbide/Gallium Nitride
405	 UV405	405	Ultraviolet	3.7	360mcd @ 20mA	12°	SiC/GaN - Silicon Carbide/Gallium Nitride
395	 UV395	395	Ultraviolet	3.7	306mcd @ 20mA	12°	SiC/GaN - Silicon Carbide/Gallium Nitride
750	 UV750	370	Ultraviolet	3.9	750μW @ 10mA	10°	GaN - Gallium Nitride

Log # 038 Rev 2/2002 ISO 9001 4.10-657A



Standard Illuminants

Source A	$u' = 0.2560$ $v' = 0.5243$
Source B	$u' = 0.2137$ $v' = 0.4852$
Source C	$u' = 0.2009$ $v' = 0.4610$
Source D65	$u' = 0.1978$ $v' = 0.4684$
Source E	$u' = 0.2105$ $v' = 0.4737$

Chart is provided for an understanding of color relationships. RGB monitors and printed materials cannot reproduce the full gamut of the color spectrum as perceived in human vision. The color areas shown only depict rough categories and are not precise statements of color.

Source:
PHOTO RESEARCH

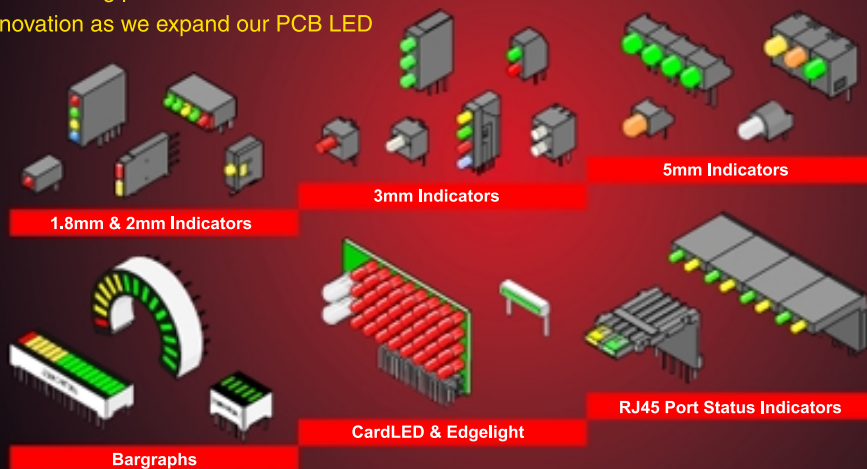
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