



## Products

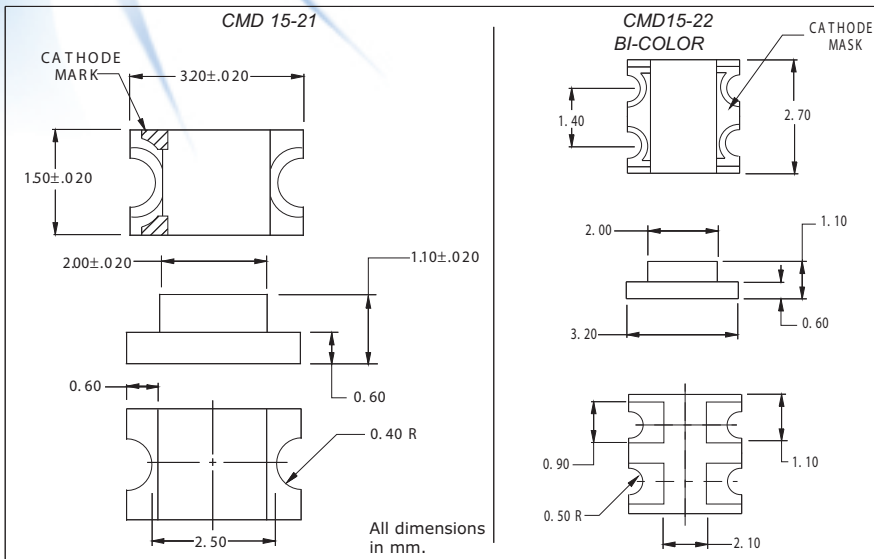
### LEDs

CML IT is a world leader in the manufacturing of LEDs and LED assemblies. CML offers a wide variety of products utilizing LEDs as a light source. Our line of discrete LEDs consists of both through hole and SMT products in all of the standard industry sizes including 3mm, 5mm, 0603, 0805, 1206, PLCC and any others. All CML-IT LEDs are available off-the-shelf in a wide variety of colors and intensities. Binning for through LEDs is one competitive service of CML Innovative Technologies, please contact us.

<p>Technical drawing of the CMD15-21 LED. The drawing includes top, side, and bottom views. Dimensions are provided in millimeters. Key dimensions include a total length of 3.2 mm, a width of 1.5 mm, and a height of 1.1 mm. The drawing also shows the internal structure of the LED, including the chip and the mounting pads.</p>	<p><b>Part Number:</b> CMD15-21SRC/TR8  <b>Serial Number:</b> CMD15-21  <b>LED Type:</b> SMT  <b>Industry Size:</b> 1206  <b>Metric Size:</b> 3.2 x 1.5 x 1.1 mm  <b>Output Color:</b> RED  <b>Epoxy:</b> CLEAR  <b>Peak Wave length (mA):</b> 660  <b>Minimum MCD:</b> 6  <b>Typical MCD:</b> 15  <b>Forward Volt (Typical):</b> 1.7  <b>Forward Volt (Max):</b> 2.4  <b>Rate Current (mA):</b> 20  <b>Viewing Angle (°):</b> 140  <b>Operating Temperature:</b>  <b>Storage Temperature:</b>  <b>Power Dissipation:</b> 105  <b>Cont Forward Current Max:</b> 30  <b>RoHS Status:</b> Yes</p>
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**CMD15-21 & 22 Series SMT LEDs 1206 Package Size**

**DESCRIPTION AND FEATURES**



**Surface Mount Technology**

- Tape and reel packaged for high-speed autoinsertion.
- Convection and vapor-phase reflow compatible.
- Compact form enables high density placement.
- Packaged 2000 pieces per reel.

**Leading Edge LED Optoelectronic Performance**

- Consistent high brightness.
- Integral lensing for narrow angle light dispersion.
- Bi-color available.

**Exceptional Reliability**

- Stringent process controls assure quality.
- Extensive qualification testing to meet strictest requirements.
- Designed to permit easy post-reflow solder joint inspection.
- Solder pad geometry on page 1-X2.

**ELECTRO-OPTICAL CHARACTERISTICS**

Part Number	Emitted Color	Lens Color	Luminous Intensity		Forward Voltage		Test Current (mA)	Peak Wavelength (nm)
			Min. (mcd)	Typ. (mcd)	Typ. (V)	Max. (V)		
CM D15-21S RC /TR 8	Super Red	Clear	6.0	15.0	1.7	2.4	20	660
CM D15-21V RC /TR 8	H.E.Red	Clear	3.6	6.0	2.0	2.8	20	640
CM D15-21V YC /TR 8	Yellow	Clear	3.6	6.0	2.0	2.8	20	585
CM D15-21V GC /TR 8	Green	Clear	6.0	10.0	2.1	2.8	20	570
CM D15-21U BC /TR 8	Blue	Clear	19.0	45.0	4.9	5.5	20	430
CM D15-21U GC /TR 8	Green	Clear	7.0	12.0	2.1	2.8	20	565
CM D15-21V RD /TR 8	H.E.Red	Red Diffused	2.4	4.0	2.0	2.8	20	640
CM D15-21V GD /TR 8	Clear	Green Diffused	5.5	6.5	2.1	2.8	20	570
CM D15-21V YD /TR 8	Clear	Yellow Diffused	3.7	4.0	2.0	2.8	20	585
CM D15-21U YC /TR 8	Super Yellow	Clear	27.0	47.0	2.1	2.8	20	590
CM D1521U SOC/TR 8	Sunset orange	Clear	17.0	31.0	2.1	2.8	20	620
CM D1522V RVGC/TR8	H.E.Red	Clear	3.6	20.0	2.8	2.8	20	640
	Green	Clear	6.0	10.0	2.1	2.8	20	570
CM D15-22S RUG C/TR 8	Red	Clear	9.0	15.0	1.7	2.4	20	660
	Green	Clear	7.0	12.0	2.1	2.8	20	565

**ABSOLUTE MAXIMUM RATINGS**

	Green	H.E.Red	Yellow	Red	Units
Power Dissipation.....	105	105	105	100	mW
Storage/Operating Temperature.....	-40 to +85	-40 to +85	-40 to +85	-40 to +85	°C
Peak Forward Current (1µs @ 10% duty cycle).....	150	150	150	150	mA
Reverse Voltage (IR=100µA).....	5.0	5.0	5.0	5.0	V
Lead Solder Time @ 260°C.....	5	5	5	5	Seconds
Average Forward Current.....	25	30	30	30	mA