

PLCC2020FRGB1T DATASHEET

PLCC LED, 2020, Flat Lens, RGB

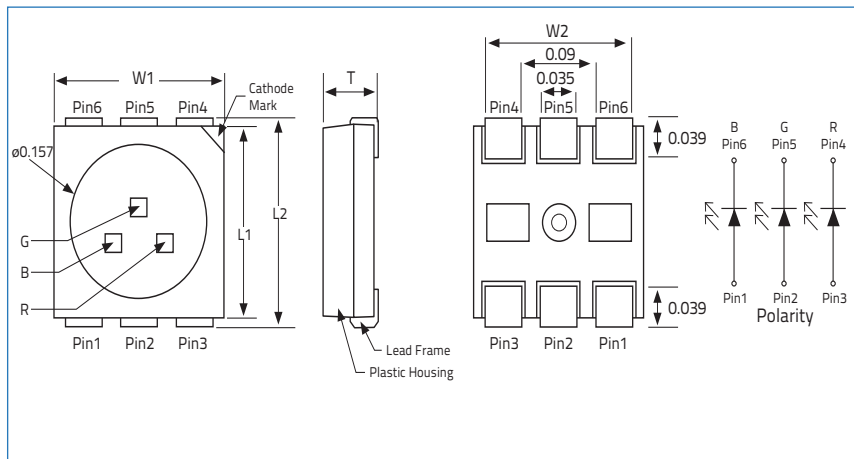


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Part Number	Size	Emitting Color	Emitting Material	Lens-Color	Luminous Intensity mcd	Wavelength nm λ_P	Viewing Angle (2θ 1/2)
PLCC2020FRGB1T	2020	Red, Green, Blue (RGB)	AlGaInP, InGaN	Clear	Red: 800 mcd typ Green: 1700 mcd typ Blue: 300 mcd typ	Red: 628 nm typ Green: 523 nm typ Blue: 472 nm typ	120°

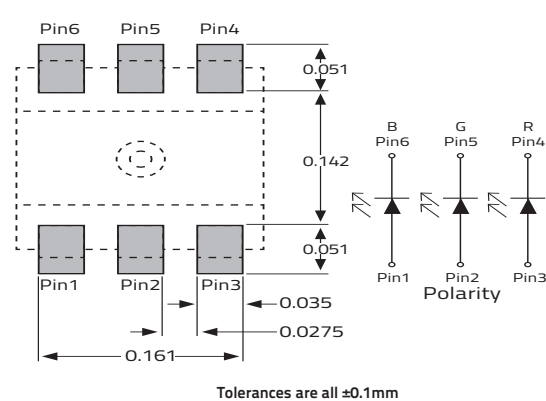
Electrical & Optical Specifications ($T_A=25^\circ\text{C}$)		Red @20mA	Green @20mA	Blue @20mA	Unit
Forward Voltage Typ.	V_F	2.1	3.1	3.1	V
Forward Voltage Max.	V_F	2.6	3.9	3.9	V
Reverse Current (Max) ($V_R=5V$)	I_R	<100	<100	<100	μA
Peak Wavelength Typ.	λ_P	628	523	472	nm
Dominant Wavelength Typ.	λ_D	624	525	467	nm
Spectral Line Half Width Typ.	$\Delta\lambda$	15	15	15	nm

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$)		Red	Green/Blue	Unit
Reverse Voltage	V_R	5	5	V
DC Forward Current	I_F	20	20	mA
Peak Forward Current 1/10 Duty Cycle @ 10KHz	I_{FP}	30	30	mA
Power Dissipation	P_D	52	78	mW
Operating Temperature	T_A	-40 ~ +85		°C
Storage Temperature	T_{stg}	-40 ~ +100		



Dimensions				Units: Inches (mm)
L_1	L_2	W_1	W_2	
0.196±0.004 (5.0±0.1)	0.212±0.004 (5.4±0.1)	0.196±0.004 (5.0±0.1)	0.161±0.004 (4.10±0.1)	
T				
0.063±0.004 (1.6±0.1)				

Soldering Pad Layout



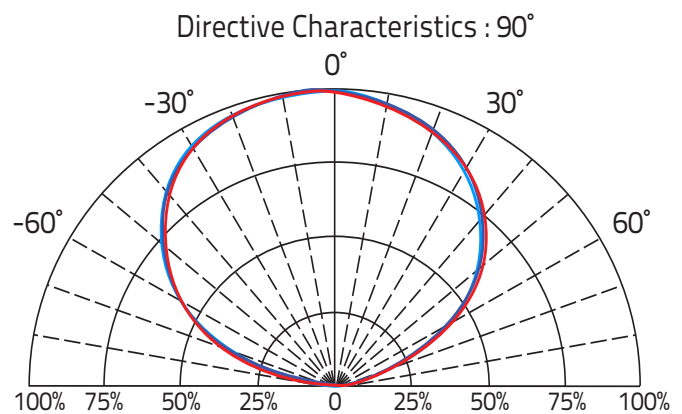
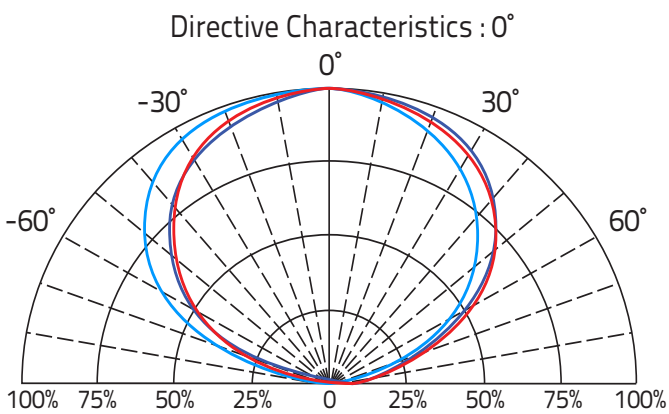
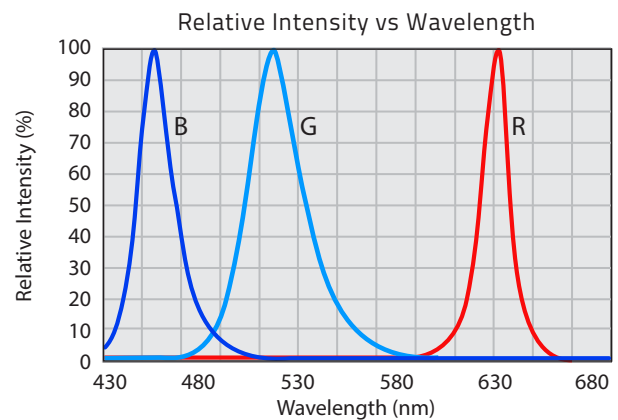
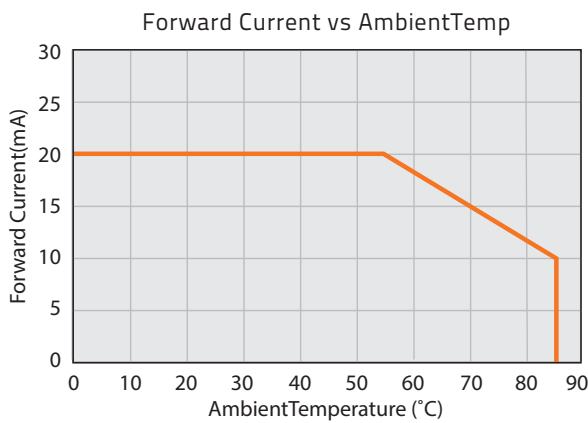
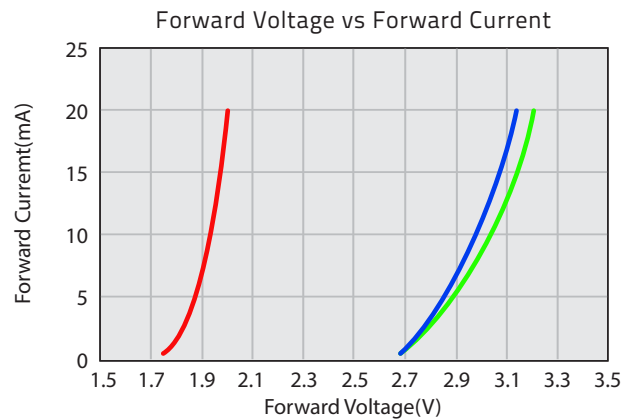
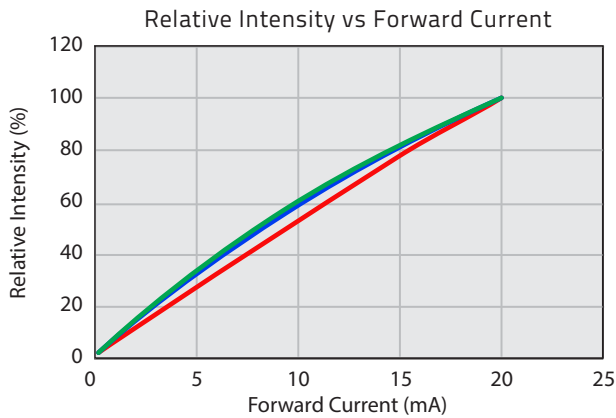
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Graphs



Environmental information

RoHS Status	6 of 6 Compliant
REACH Status	Compliant
Halogen Status	Halogen Free
Conflict Mineral Status	Conflict Mineral Free
Moisture Sensitivity Level (MSL)	5a

Reflow profile

Max Reflow Temperature	260°C
Number of Reflow Cycles	2
Time at Max Reflow Temperature	10 seconds

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Label Example

Item: PLCC2020FRGB1T
 PLCC LED,2020,Flat Lens,RGB
 Qty: 1000 D/C: 1017
 Lot: E1A1A22L12 VF: 1.6-2.6
 VF: 2.9-3.1
 BIN/HUE: W/AC-Z/A-T/B VF: 2.9-3.1

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 YOUR SINGLE SOURCE FOR SURFACE MOUNT PASSIVES

Codes:

VF: Forward Voltage | BIN: Luminous Intensity | HUE: Dominant Wavelength

Luminous Intensity Classification (BIN Code)

RED BIN Code	lv(mcd) at 20mA	
	Min.	Max.
W	560	715
X	715	900
Y	900	1125

Green BIN Code	lv(mcd) at 20mA	
	Min.	Max.
Z	1125	1440
AA	1440	1800
AB	1800	2250

Blue BIN Code	lv(mcd) at 20mA	
	Min.	Max.
S	180	285
T	285	360
U	360	450

Dominant Wavelength Classification (HUE Code)

λ_D (nm)								
Red			Green			Blue		
Hue Code	Min.	Max.	Hue Code	Min.	Max.	Hue Code	Min.	Max.
AC	615	630	A	515	520	A	460	464
			B	520	525	B	464	468
			C	525	530	C	468	472

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Reel Specifications Units: mm

M	C	F	E	G
178±1.5	56.0±1.0	12.0±0.1	60.0±1.0	9.0±0.1

Packaging Specifications

Reel Size:	7"
Quantity per Reel :	1,000

- ### Storage Specifications
- Storage temperature and RH: 5°C~35°C, RH60%
 - Once the package is opened, the LEDs should be used within a week. Otherwise, they should be kept in a moisture proof bag with desiccant. We suggest that you use this product within one year from date code.
 - If opened for more than 72 HOURS in an atmosphere of 5°C~35°C, RH60%. The parts should be heat treated at 60°C±5°C for 15 hours.

Tape Specifications Units: mm

Dim. A	Dim. B	Dim. C	Qty/Reel
5.70±0.10	5.30±0.10	1.80±0.10	1000