



# T1(3mm) Sub-Midget Based LEDs

Subminiature Packages	Replaces Incandescent	Part Number	Electrical-Optical Characteristics (Ta = 25°C)			Angle of Illumination	Special Features
			Voltage V typ	Current mA typ	Intensity mcd		
<b>660nm Ultra Red GaAlAs/GaAlAs</b>  F121 Ceramic Base FF120 	682,685,714,718	FF120-0UR-005P	5V	20	100	120°	Center Contact Polarity P = Positive N = Negative  Replace FF120 With F120 Standard (65°) Beam Intensity 180 mcd/30 Ft.Cd
	7241	FF120-0UR-018P	18V	15	50		
	6839	FF120-0UR-024P	24V	12	33		
	6839	FF120-0UR-028P	28V	12	33		
<b>612nm Super Orange InGaAlP</b>  F121 Ceramic Base FF120 	682,685,714,718	FF120-0UO-005P	5V	20	85	120°	Center Contact Polarity P = Positive N = Negative  Replace FF120 With F120 Medium (50°) Beam Intensity 350 mcd
	7241	FF120-0UO-018P	18V	15	64		
	6839	FF120-0UO-024P	24V	12	51		
	6839	FF120-0UO-028P	28V	12	51		
<b>595nm Super Yellow InGaAlP</b>  F121 Ceramic Base FF120 	682,685,714,718	FF120-0UY-005P	5V	20	32	120°	Center Contact Polarity P = Positive N = Negative  Replace FF120 With F120 Medium (50°) Beam Intensity 1K mcd
	7241	FF120-0UY-018P	18V	15	21		
	6839	FF120-0UY-024P	24V	12	15		
	6839	FF120-0UY-028P	28V	12	15		
<b>8000K Cool White SiC/GaN</b>  F121 Ceramic Base FF120 	682,685,714,718	FF120-0CW-005P	5V	15	150	120°	Center Contact Polarity P = Positive N = Negative  Replace FF120 With F120 Std. (50°) Beam Intensity 650 mcd/75 Ft. cd
	7241	FF120-0CW-018P	18V	15	150		
	6839	FF120-0CW-024P	24V	10	100		
	6839	FF120-0CW-028P	28V	10	100		
<b>570nm Lime Green InGaAlP</b>  F121 Ceramic Base FF120 	682,685,714,718	FF120-0UG-005P	5V	20	36	120°	Center Contact Polarity P = Positive N = Negative  Replace FF120 With F120 Medium (50°) Beam Intensity 165 mcd @ 20 mA
	7241	FF120-0UG-018P	18V	15	27		
	6839	FF120-0UG-024P	24V	12	22		
	6839	FF120-0UG-028P	28V	12	22		
<b>525nm Aqua Green SiC/GaN</b>  F121 Ceramic Base FF120 	682,685,714,718	FF120-0AG-005P	5V	15	200	120°	Center Contact Polarity P = Positive N = Negative  Replace FF120 With F120 Narrow (15°) Beam Intensity 5K mcd/145 Ft.Cd
	7241	FF120-0AG-018P	18V	15	200		
	6839	FF120-0AG-024P	24V	10	150		
	6839	FF120-0AG-028P	28V	10	150		
<b>470nm Super Blue SiC/GaN</b>  F121 Ceramic Base FF120 	682,685,714,718	FF120-0PB-005P	5V	15	60	120°	Center Contact Polarity P = Positive N = Negative  Replace FF120 With F120 Std. (15°) Beam Intensity 1.5K mcd/32 Ft.Cd @ 15 mA
	7241	FF120-0PB-018P	18V	15	60		
	6839	FF120-0PB-024P	24V	10	45		
	6839	FF120-0PB-028P	28V	10	45		

All dimensions in inches. For millimeters multiply by 25.4

## Options

Series: F120 (No Resistor)  
 PN Example: F120-0UR-002F

Series: F121 (1 Chip, 160°)  
 PN Example: F121-0UY-005P

Series: F122 (2 Chip, 160°)  
 PN Example: F122-0UO-005P

Series: F124 (4 Chip, 160°)  
 PN Example: F124-0UR-028P

Series: HLD310 (Rear Mount)  
 PN Example: HLD310CW900-5V-P

Series: HLC310 (Front Mount)  
 PN Example: HLC310CB1K-5V-P

RFI EMI Shield

Holder: HLC2020

Series: HL230

See Data Sheet Log #119 for Complete Information on Panel Mount LEDs

Log # 122A Rev 09-2000