



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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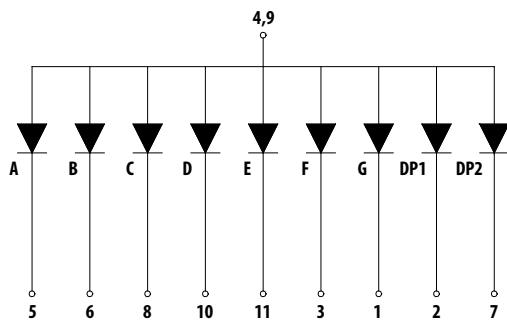
Pin Connection (Common Anode)

PIN No	Connection
1	CATHODE G
2	CATHODE DP1
3	CATHODE F
4	COMMON ANODE
5	CATHODE A
6	CATHODE B
7	CATHODE DP2
8	CATHODE C
9	COMMON ANODE
10	CATHODE D
11	CATHODE E

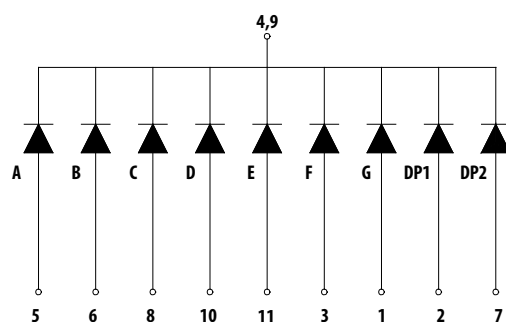
Pin Connection (Common Cathode)

PIN No	Connection
1	ANODE G
2	ANODE DP1
3	ANODE F
4	COMMON CATHODE
5	ANODE A
6	ANODE B
7	ANODE DP2
8	ANODE C
9	COMMON CATHODE
10	ANODE D
11	ANODE E

Internal Circuit Diagram (Common Anode)



Internal Circuit Diagram (Common Cathode)



Absolute Maximum Ratings @ $T_A=25^\circ$

Parameter	Green/Yellow/Red/Orange	Unit
Power Dissipation Per Segment	65	mW
Peak Forward Current Per Segment (1/10 Duty Cycle, .01ms pulse width)	100	mA
Continuous Forward Current Per Segment Derating Linearly From 25°C Per Segment	25 0.25	mA mA/°C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-40°C to +105°C	
Storage Temperature Range	-40°C to +105°C	

Electrical / Optical Characteristics @ T_A=25°C

Green

Parameters	Symbol	Min	Typ	Max	Unit	Test Condition
Average Luminous Intensity	I _V	3.4	6	-	mcd	I _F = 10mA
Emissions Wavelength	η _p /λ _d	-	572/571	-	nm	I _F = 20mA
Spectral Line Half-Width	Δλ	-	20	-	nm	I _F = 20mA
Forward Voltage, Per Segment	V _F	-	2.1	2.6	V	I _F = 20mA
Reverse Current, Per Segment	I _R	-	-	100	μA	V _R = 5V
Luminous Intensity Matching Ratio	I _{V-M}	-	-	2:1	-	I _F = 10mA

Yellow

Parameters	Symbol	Min	Typ	Max	Unit	Test Condition
Average Luminous Intensity	I _V	3.4	8.0	-	mcd	I _F = 10mA
Emissions Wavelength	λ _p /λ _d	-	591/589	-	nm	I _F = 20mA
Spectral Line Half-Width	Δλ	-	15	-	nm	I _F = 20mA
Forward Voltage, Per Segment	V _F	-	2.1	2.6	V	I _F = 20mA
Reverse Current, Per Segment	I _R	-	-	100	μA	V _R = 5V
Luminous Intensity Matching Ratio	I _{V-M}	-	-	2:1	-	I _F = 10mA

Red

Parameters	Symbol	Min	Typ	Max	Unit	Test Condition
Average Luminous Intensity	I _V	3.4	7.5	-	mcd	I _F = 10mA
Emissions Wavelength	λ _p /λ _d	-	632/624	-	nm	I _F = 20mA
Spectral Line Half-Width	Δλ	-	20	-	nm	I _F = 20mA
Forward Voltage, Per Segment	V _F	-	2.0	2.6	V	I _F = 20mA
Reverse Current, Per Segment	I _R	-	-	100	μA	V _R = 5V
Luminous Intensity Matching Ratio	I _{V-M}	-	-	2:1	-	I _F = 10mA

Orange

Parameters	Symbol	Min	Typ	Max	Unit	Test Condition
Average Luminous Intensity	I _V	3.4	8.5	-	mcd	I _F = 10mA
Emissions Wavelength	λ _p /λ _d	-	611/605	-	nm	I _F = 20mA
Spectral Line Half-Width	Δλ	-	20	-	nm	I _F = 20mA
Forward Voltage, Per Segment	V _F	-	2.1	2.6	V	I _F = 20mA
Reverse Current, Per Segment	I _R	-	-	100	μA	V _R = 5V
Luminous Intensity Matching Ratio	I _{V-M}	-	-	2:1	-	I _F = 10mA

Typical Electrical / Optical characteristic curves @ $T_A=25^\circ\text{C}$

Green

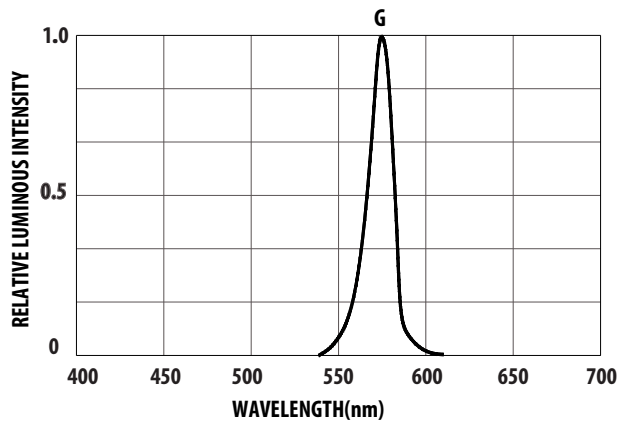


Figure 1. Relative Luminous Intensity vs. Wavelength

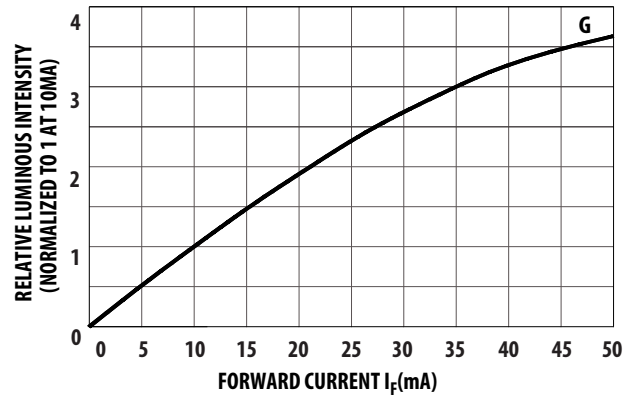


Figure 2. Relative Luminous Intensity vs. Forward Current

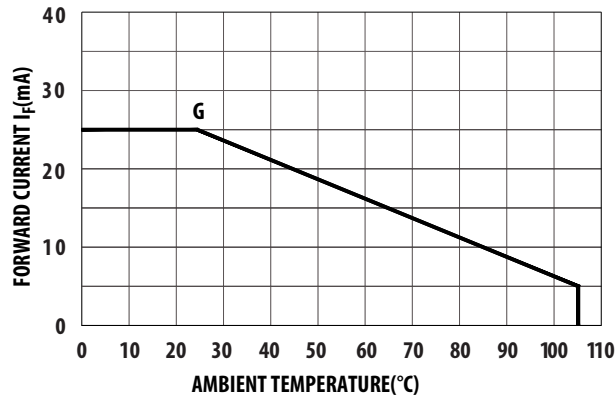


Figure 3. Allowable DC Current vs. Ambient Temperature

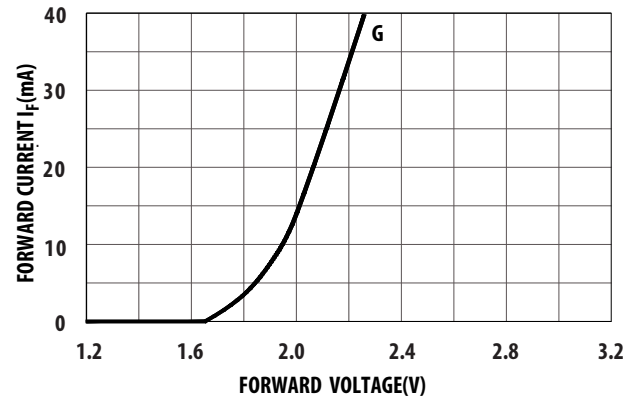


Figure 4. Forward Current vs. Forward Voltage

Yellow

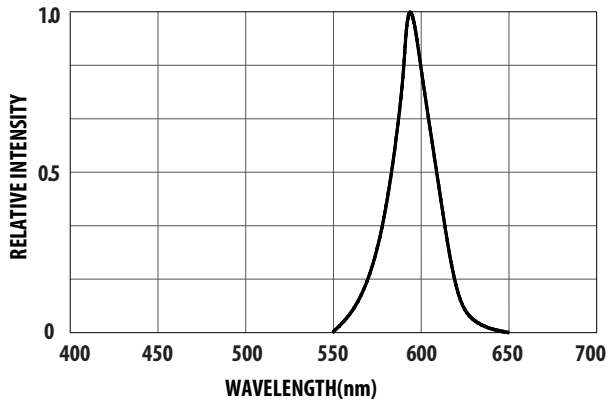


Figure 1. Relative Intensity vs. Wavelength

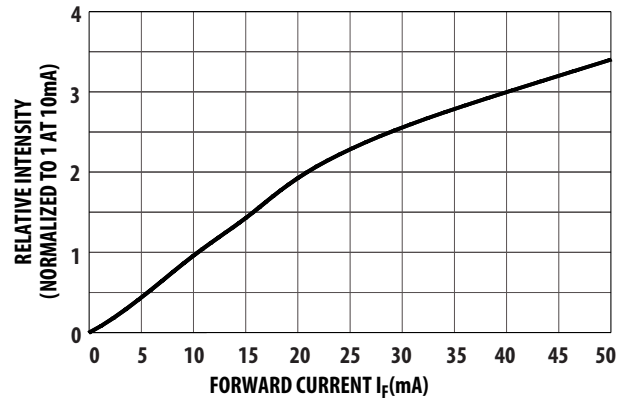


Figure 2. Relative Intensity vs. Forward Current

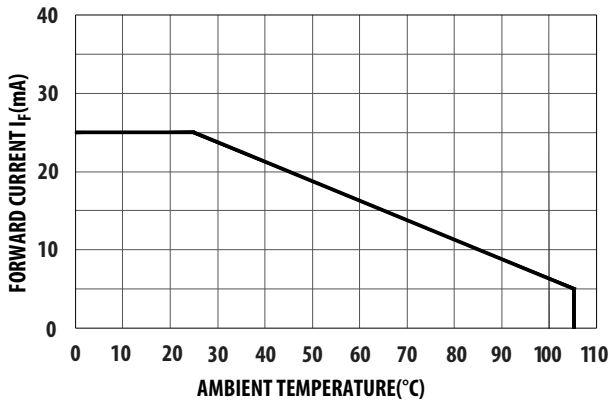


Figure 3. Allowable DC Current vs. Ambient Temperature

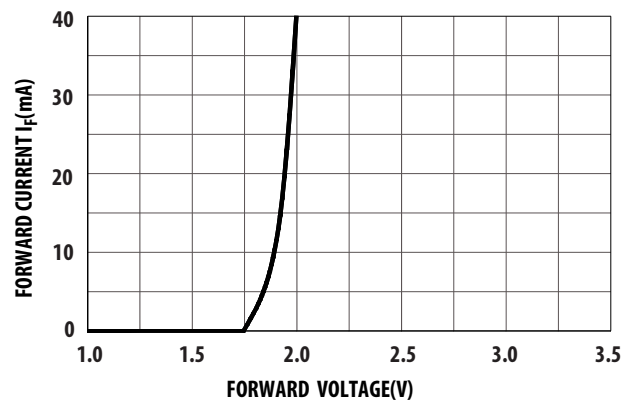


Figure 4. Forward Current vs. Forward Voltage

Red

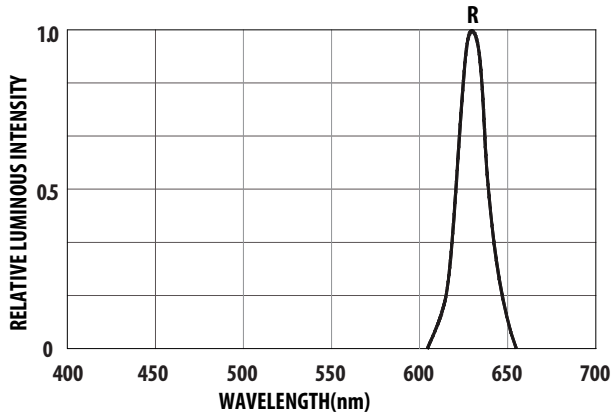


Figure 1. Relative Luminous Intensity vs. Wavelength

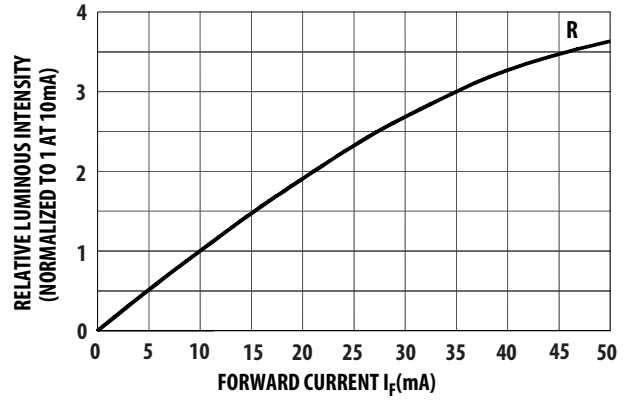


Figure 2. Relative Luminous Intensity vs. Forward Current

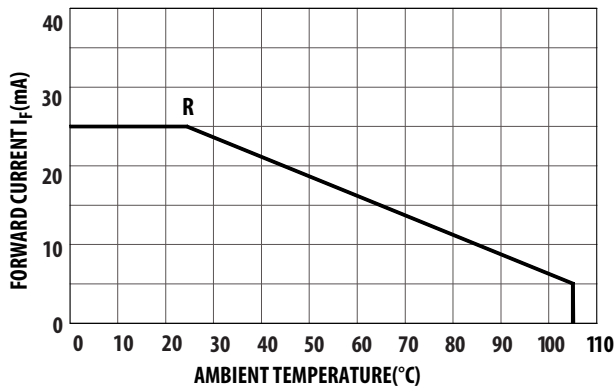


Figure 3. Allowable DC Current vs. Ambient Temperature

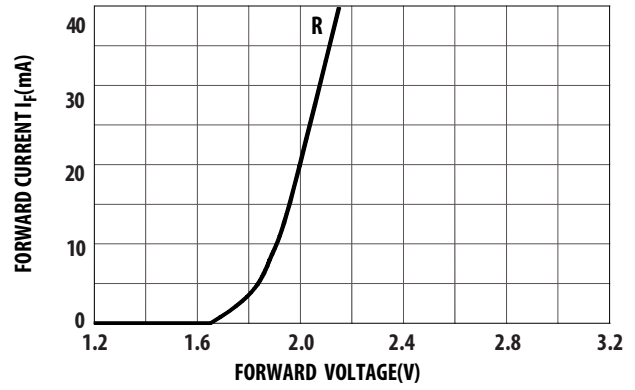


Figure 4. Forward Current vs. Forward Voltage

Orange

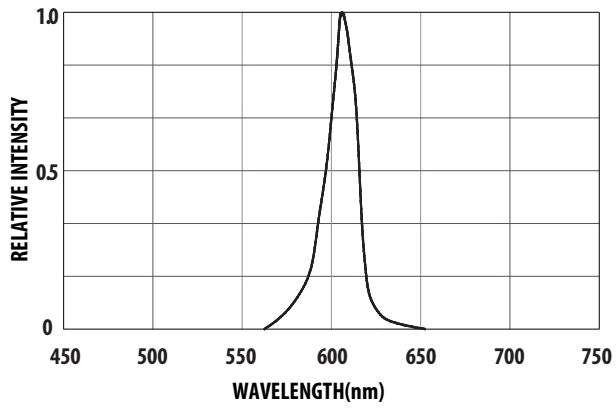


Figure 1. Relative Intensity vs. Wavelength

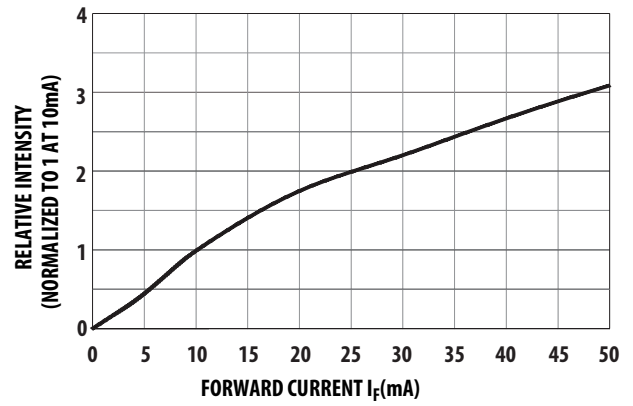


Figure 2. Relative Intensity vs. Forward Current

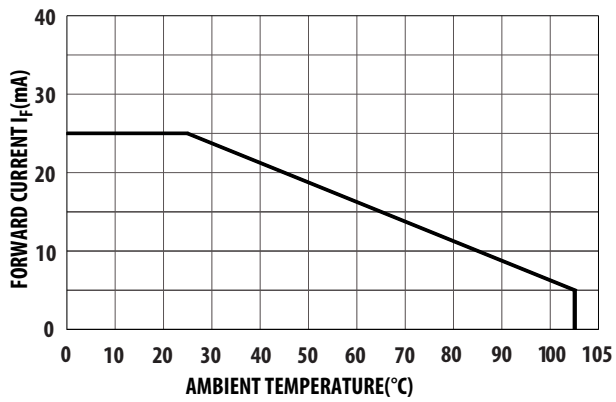


Figure 3. Allowable DC Current vs. Ambient Temperature

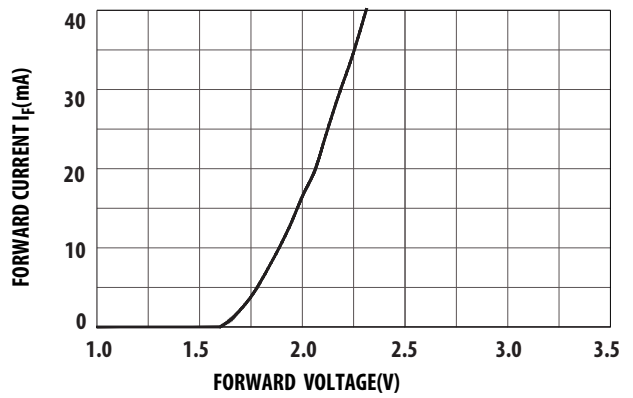


Figure 4. Forward Current vs. Forward Voltage

Intensity Bin Limits (mcd)

Yellow / Red / Orange / Green

IV Bin Category	Min.	Max
L	3.401	5.400
M	5.401	8.600
N	8.601	13.700
P	13.701	21.800

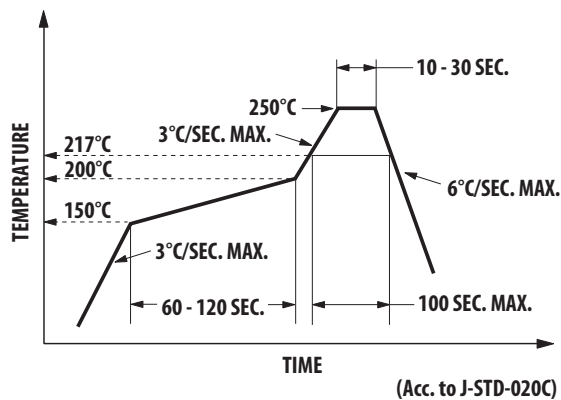
Tolerance: $\pm 15\%$

Notes:

- Bin categories are established for classification of products. Products may not be available in all categories. Please contact your Avago representative for information on currently available bins.

SMT Soldering Profile

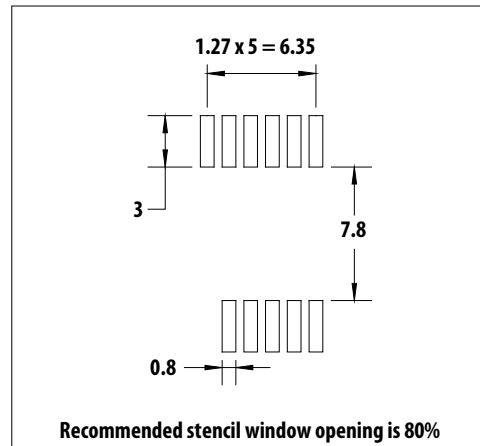
Pb free reflow soldering Profile



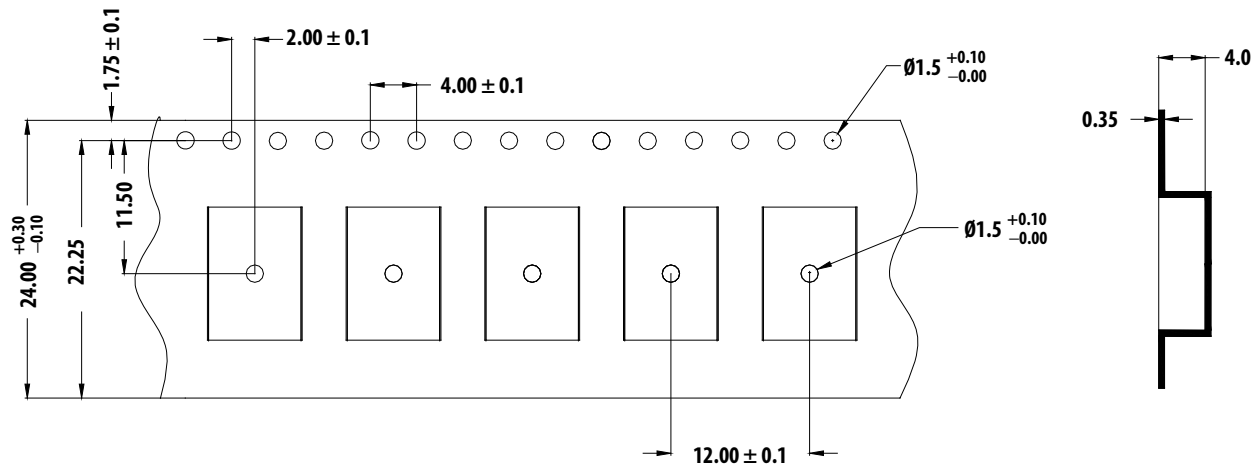
Notes:

- The peak temperature refers to the peak package body temperature.
- Number of reflow process shall be limited to maximum 2 times only. Cooling process to normal temperature is required between first and second soldering process.

Recommended soldering pattern (unit: mm)



Tape specification (unit: mm)



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