

Surface Mount Yellow / Red Chip LED - 0805

multicomp PRO

**RoHS
Compliant**



Features

- Dimensions: 2 × 1.25 × 0.7mm.
- Wide Viewing Angle.

Applications

- Automotive: Backlighting in dashboard and switch.
- Telecommunication: Indicator and Backlighting in telephone and fax.
- Flat Backlight for LCD switch and symbol.

Device Selection Guide

Part No.	Chip		Lens Colour
	Material	Emitted Colour	
MP005934	(InGaAlP)	Yellow	Water Clear
	(InGaAlP)	Red	

Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Red	Green	Unit
Power Dissipation	P _D	62		mW
Forward Current	I _F	25		mA
Peak Forward Current*1	I _{FP}	100		mA
Reverse Voltage	V _R	5		V
Operating Temperature	T _{opr}	-40°C To +85°C		
Storage Temperature	T _{stg}	-40°C To +85°C		

Notes:

*1: Pulse width ≤ 0.1ms, Duty cycle ≤ 1/10

Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Device	Min.	Typ.	Max	Unit	Test Conditions
Forward Voltage (one circuit)	V _F	Yellow Red	—	2.2 2.2	2.5 2.5	V	I _F =20mA
Reverse Current (one circuit)	I _R		—	—	10	μA	V _R =5V
Dominant Wavelength	λ _D		586 617	—	594 629	nm	I _F =20mA
Luminous Intensity	I _v		100 130	—	225 295	mcd	I _F =20mA
Viewing Angle	2θ _{1/2}		—	120 120	—	Deg.	I _F =20mA

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or chromaticity), the typical accuracy of the sorting process is as follows:

1. wavelength: ±1nm
2. Luminous Intensity: ±15%
3. Forward Voltage: ±0.1V

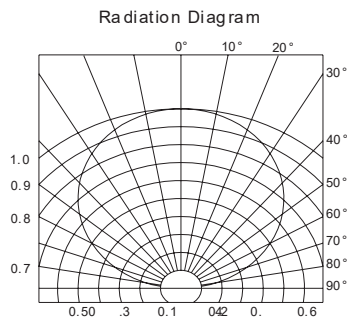
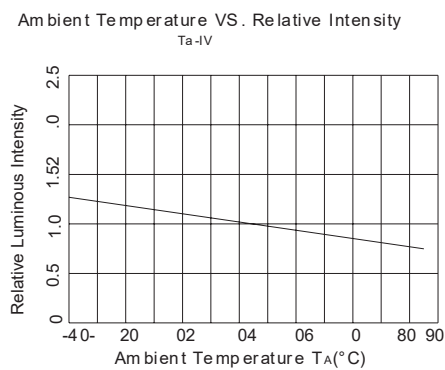
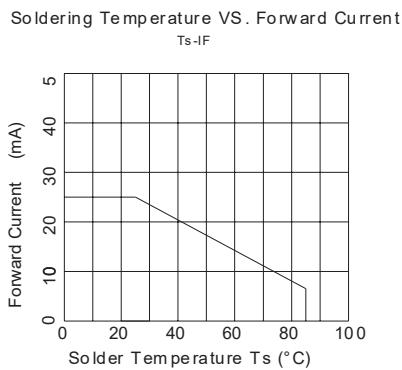
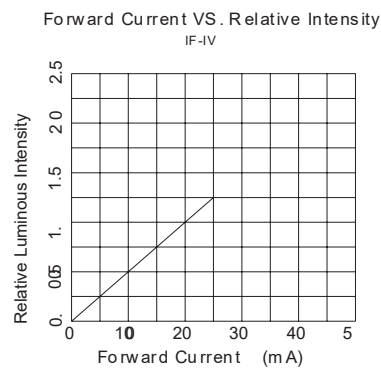
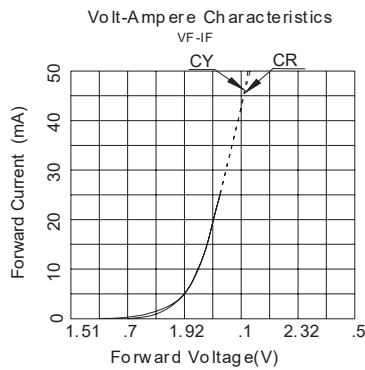
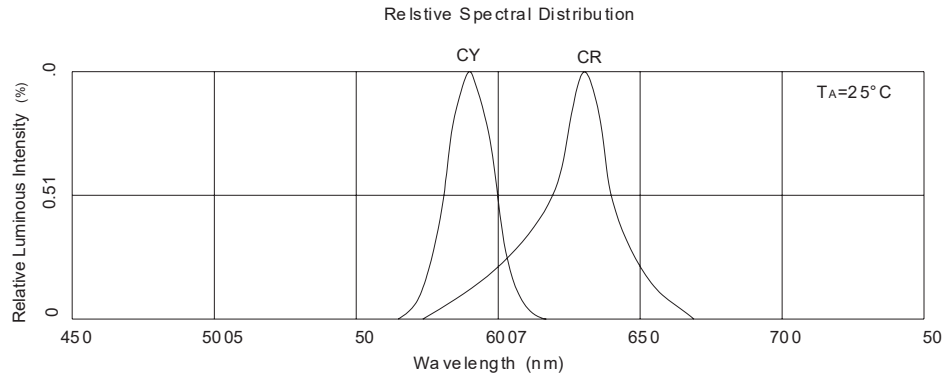
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Typical Electrical/Optical Characteristics Curves



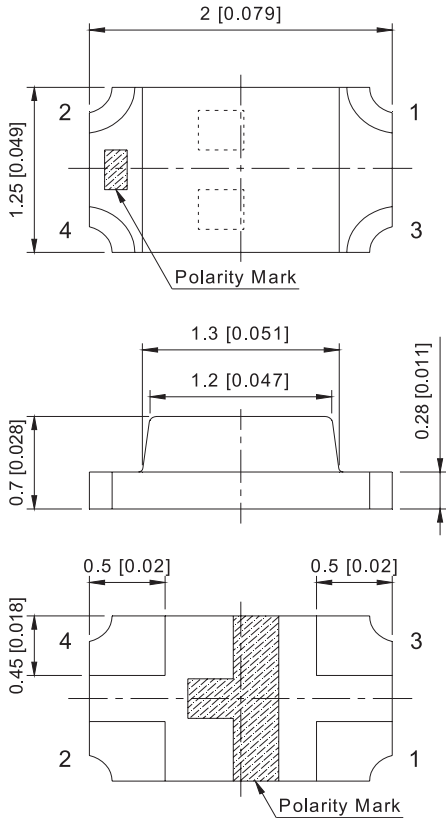
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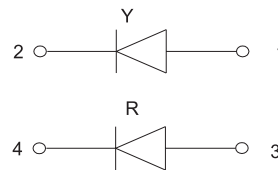
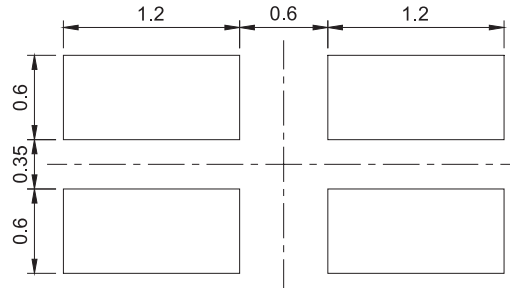
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Package Dimensions



Recommended soldering pattern



Notes:

1. All dimensions are in millimeters.
2. Tolerance is ± 0.15 unless otherwise noted.
3. Specifications are subject to change without notice.

VF Rank

Yellow

Rank	IV(mcd)		Test Conditions
	Min	Max	
N	100	130	IF=20mA
P	130	170	
Q	170	225	

Tolerance: $\pm 15\%$

Red

Rank	IV(mcd)		Test Conditions
	Min	Max	
P	130	170	IF=20mA
Q	170	225	
R	225	295	

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λD Rank

Rank	λD(mcd)		Test Conditions
	Min	Max	
4	586	588	IF=20mA
5	588	590	
6	590	592	
7	592	594	

Rank	λD(mcd)		Test Conditions
	Min	Max	
5	617	621	IF=20mA
6	621	625	
7	225	629	

Tolerance:±1nm

Test Item	Reference	Test Conditions	Time	Quantity	Criterion
Thermal Shock	JIS-C7021 A-4	100°C±5°C 15min ↓↑ -40°C±5°C 15min	200cycles 200	22	0/22
High Temperature Storage	JEITA ED- 4701 200 201	Ta=100°C	1000h 1000		
Low Temperature Storage	JEITA ED- 4701 200 202	Ta=-40°C			
High Temperature High Humidity Storage	JIS-C7021 B-11	Ta=85, RH=85%			
Resistance to Soldering Heat	GB/T 4937	Tsol*=(260±5)°C 10secs.			
Life Test	JESD22-A108	Ta=25°C±5°C IF=20mA			
High Temperature Life Test		Ts=55°C±5°C			

Note:Tsol-Temperature of tin liquid.

Item	Symbol	Test Conditions	Failure Criteria	
			MIN.	MIN.
Forward Voltage	VF(V)	IF=20mA	-	U.S.L*1.1
Reverse Current	IR(uA)	VR=5V	-	10uA
Luminous Intensity	IV(mcd)	IF=20mA	L.S.L*0.7	-

Note:1.USL:Upper Specification Level
2.LSL:Lower Specification Level

Part Number Table

Description	Part Number
SMD Chip LED, 0805, Yellow / Red, 225/295mcd, 120°	MP005934

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