



# TOYO LED ELECTRONICS LIMITED

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## CODE O

**Chip Material: AlGaAs / GaAs Hi-bright Red LED Chip**



### ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

PARAMETER	SYMBOL	MAXIMUM RATING	UNIT
Power Dissipation	P <sub>D</sub>	68	mW
Peak Forward Current (1/10 Duty Cycle, 0.1 Ms Pulse Width)	I <sub>PEAK</sub>	80	mA
DC Forward Current	I <sub>F</sub>	30	mA
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature Range	T <sub>A</sub>	-40°C to +85°C	
Storage Temperature Range	T <sub>STG</sub>	-40°C to +85°C	
Solder temperature 1/16 inch below seating plane for 3 seconds at 260°C			

### ELECTRICAL OPTICAL CHARACTER AND CURVES (Ta = 25°C)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	LOCATION	TEST CONDITION
Forward Voltage	V <sub>F</sub>	-	1.82	2.25	V	Per Chip	I <sub>F</sub> = 20mA
Luminous Intensity	I <sub>v</sub>	17.0	19.0	21.0	mcd	Per Chip	I <sub>F</sub> = 20mA
Peak Emission Wavelength	λ <sub>p</sub>	-	655	-	nm	Per Chip	I <sub>F</sub> = 20mA
Dominant Emission Wavelength	λ <sub>d</sub>	640	644	646	nm	Per Chip	I <sub>F</sub> = 20mA
Spectral Line Half-Width	Δλ <sub>1/2</sub>	-	20	-	nm	Per Chip	I <sub>F</sub> = 20mA
Capacitance	C	-	40	-	pF	Per Chip	V <sub>F</sub> = 0V; f = 1MHz
Reverse Current	I <sub>R</sub>	-	-	10	uA	Per Chip	V <sub>R</sub> = 5V

**Note:**

- Luminous intensity tolerance is ±10%;**
- Dominant Emission Wavelength tolerance is ±5%.**



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### ■ Typical Electro-Optical Characteristic Curve:

FIG. 1 Forward Current Vs. Forward Voltage

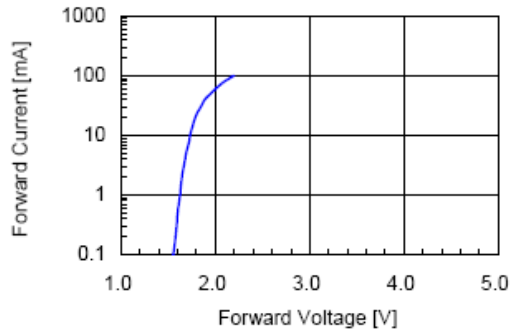


FIG. 2 Relative Intensity Vs. Forward Current

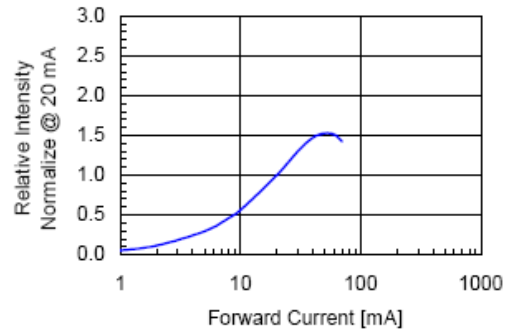


FIG. 3 Forward Voltage Vs. Temperature

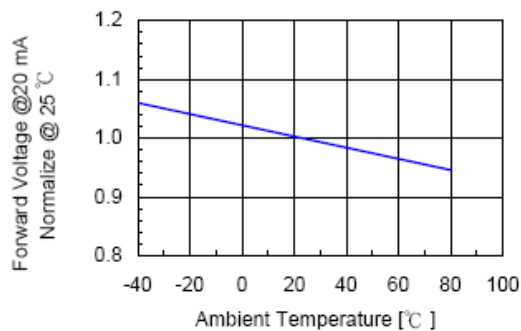


FIG. 4 Relative Intensity Vs. Temperature

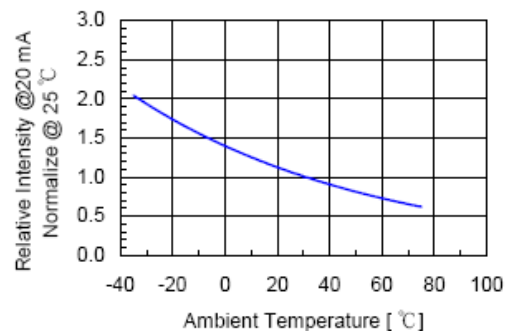


FIG. 5 Relative Intensity Vs. Wavelength

