



# MING OPTICS LTD.

RGB FULL COLOR LED LAMPS

■ **Features:**

- 5.0mm Round Type, RGB Full Color LED Lamps
- Diffused and Water clear lens are available.
- Popular T-1 diameter package.
- IC compatible /Low current capability.



RoHS Compliance

□ **Electrical-optical characteristics: (Ta=25°C) (Test Condition: IF=20mA)**

Part Number	Chip			Lens Type	Forward Voltage(VF) Unit:V		Luminous Intensity (Iv) Unit:mcd		Viewing Angle 2θ/2 (deg)	
	Emitted Color	Material	λpO (nm)		Typ	Max	Min.	Typ.		
17137 OP	<del>Ultra Orange</del>	<del>AlGaInP</del>	<del>630</del>	Water Clear	<del>2.10</del>	<del>2.50</del>	<del>800</del>	<del>2000</del>	20	
	<del>Ultra Pure Green</del>	<del>InGaN</del>	<del>525</del>		<del>3.80</del>	<del>4.50</del>	<del>2000</del>	<del>5000</del>		
	<del>Blue</del>	<del>InGaN</del>	<del>430</del>		<del>3.80</del>	<del>4.50</del>	<del>800</del>	<del>2000</del>		
	Ultra Orange	AlGaInP	630	Water Diff.	2.10	2.50	200	500	30	
		Ultra Pure Green	InGaN		525	3.80	4.50	300		600
		Blue	InGaN		430	3.80	4.50	150		300
	17138 OP	<del>Ultra Orange</del>	<del>AlGaInP</del>	<del>630</del>	Water Clear	<del>2.10</del>	<del>2.50</del>	<del>800</del>	<del>2000</del>	20
		<del>Ultra Pure Green</del>	<del>InGaN</del>	<del>525</del>		<del>3.80</del>	<del>4.50</del>	<del>2000</del>	<del>5000</del>	
		<del>Blue</del>	<del>InGaN</del>	<del>430</del>		<del>3.80</del>	<del>4.50</del>	<del>800</del>	<del>2000</del>	
Ultra Orange		AlGaInP	630	Water Diff.	2.10	2.50	200	500	30	
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		Blue	InGaN		430	3.80	4.50	150		300

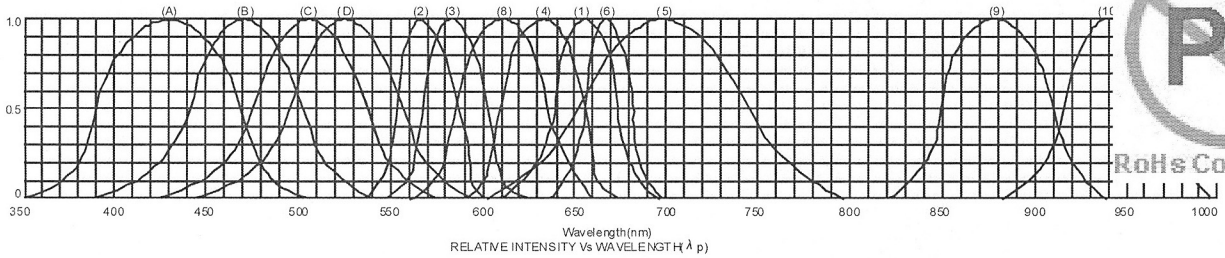
Note: -CC: common Cathode, -CA: common Anode

□ **Absolute maximum ratings (Ta=25°C)**

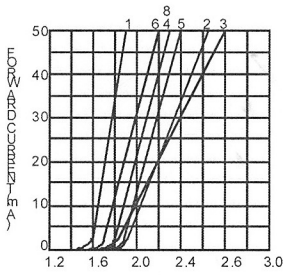
Parameter	UE	PG	UB	Unit
Forward Current I <sub>F</sub>	30	30	30	mA
Power Dissipation P <sub>d</sub>	65	110	120	mW
Reverse Voltage V <sub>R</sub>	5	5	5	V
Peak Forward Current I <sub>PF</sub> (Duty 1/10 @1KHZ)	150	150	100	mA
Operation Temperature T <sub>OPR</sub>	-40 to +80			°C
Storage Temperature T <sub>STG</sub>	-40 to +85			°C
Lead Soldering Temperature T <sub>SOL</sub>	Max.260 5°C for 3 sec Max. (1.6mm from the base of the epoxy bulb)			°C



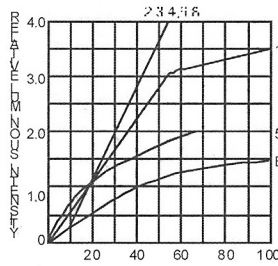
### □ Typical electrical-optical characteristics curves:



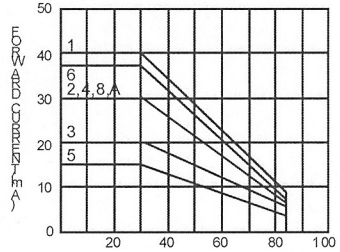
- |   |                                      |
|---|--------------------------------------|
| (1) - GaAsP/GaAs 655nm/Red                | (9) - GaAlAs 880nm                   |
| (2) - GaP 570nm/Yellow Green              | (10) - GaAs/GaAs & GaAlAs/GaAs 940nm |
| (3) - GaAsP/GaP 585nm/Yellow              | (A) - GaN/SiC 430nm/Blue             |
| (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red | (B) - InGaN/SiC 470nm/Blue           |
| (5) - GaP 700nm/Bright Red                | (C) - InGaN/SiC 505nm/Ultra Green    |
| (6) - GaAlAs/GaAs 660nm/Super Red         | (D) - InGaN/SiC 525nm/Ultra Green    |
| (8) - GaAsP/GaP 610nm/Super Red           |                                      |



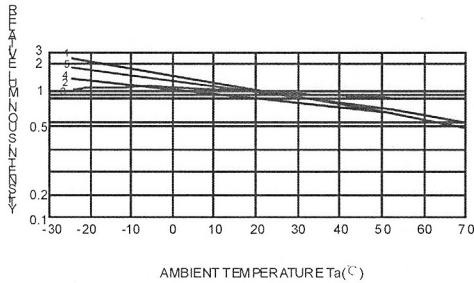
FORWARD VOLTAGE (Vf)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



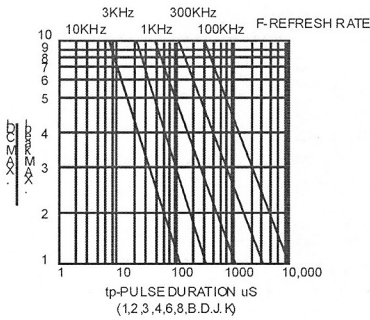
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



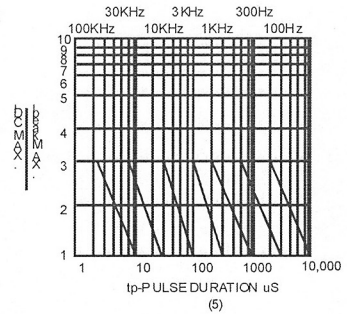
AMBIENT TEMPERATURE Ta(°C)  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta(°C)



tp-PULSE DURATION μS  
(1,2,3,4,6,8,B,D,J,K)



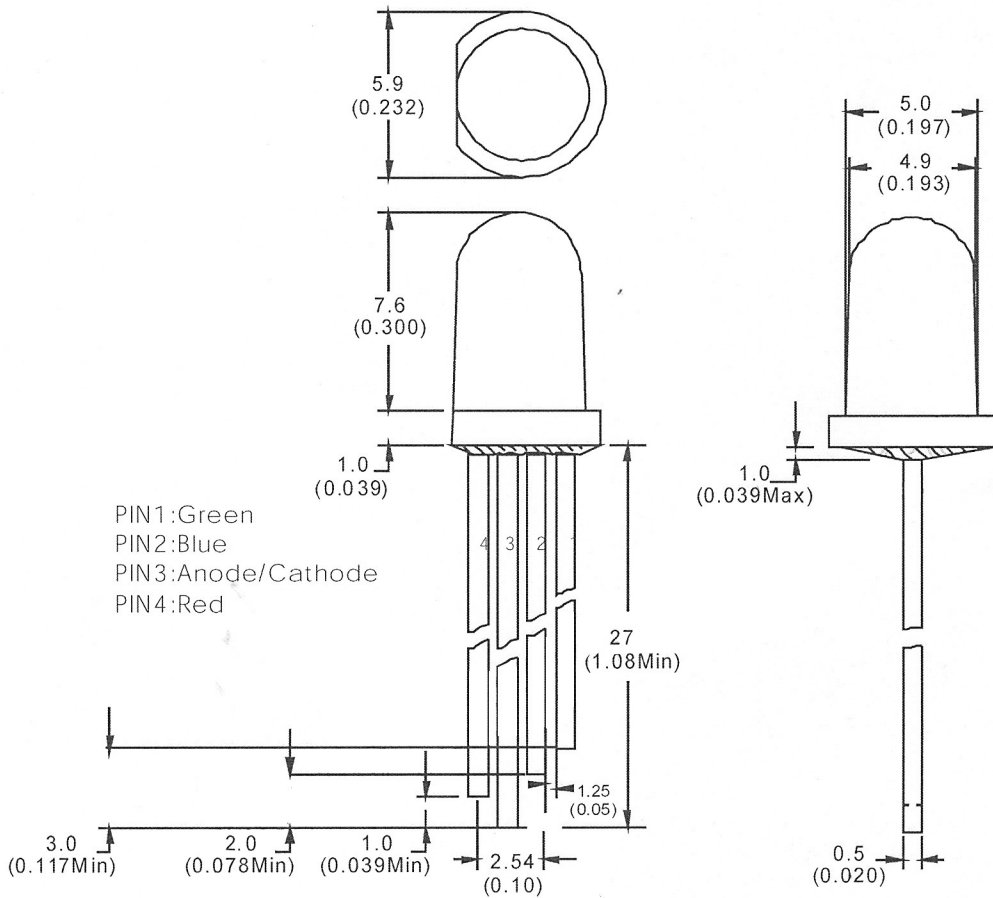
(5)

NOTE: 25°C free air temperature unless otherwise specified



# MING OPTICS LTD. RGB FULL COLOR LED LAMPS

□ Package configuration & Internal circuit diagram:



### Notes:

- All dimensions are in millimeters (inches)
- Tolerance is 0.25(0.01") unless otherwise noted.
- Specifications are subject to change without notice.