

**Winger Electronics**  
**RGB03-CM**  
**4.8mm Straw-Hat RGB LED, Common Anode**



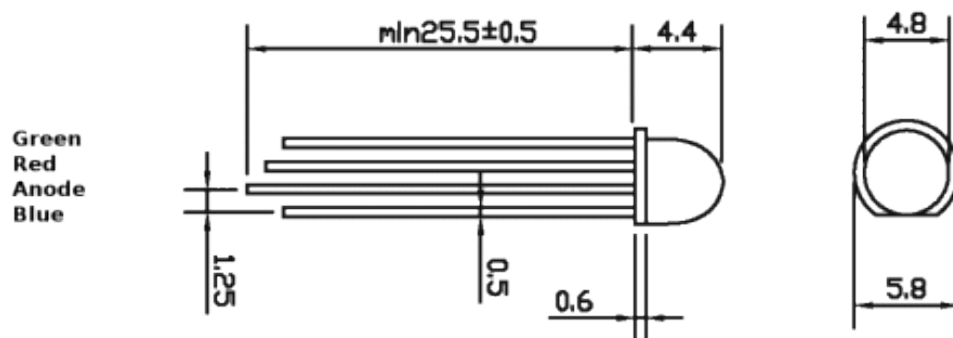
**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
SENSITIVE DEVICES



**Description**

- 4.8mm DIP LED
- Emitting Color: Red, Green, Blue

**Dimension figure**



Unit: mm  
Tolerances:  $\pm 0.25\text{mm}$

## Absolute Maximum Ratings

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	$I_F$	3x 20	mA
Peak Forward Current *	$I_{FP}$	3x 100	mA
Reverse Voltage	$V_R$	5	V
Power Dissipation	$P_O$	210	mW
Operating Temperature	$T_{OPR}$	-20 ~ +50	°C
Storage Temperature	$T_{stg}$	-40 ~ +85	°C
Lead Soldering Temperature	$T_{SOL}$	Max. 5 sec @ 260	°C

\* $I_{FP}$  Conditions: 1/10 Duty Cycle, 0.1ms Puls Width

## Typical Optical/Electrical Characteristics

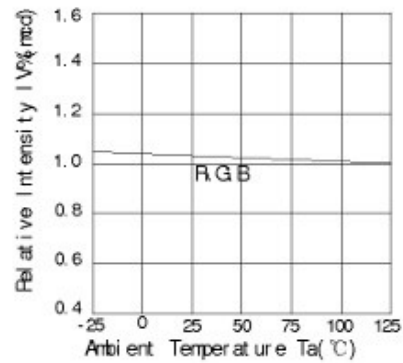
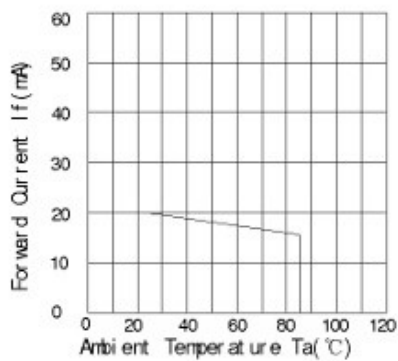
Item	Symbol	Condition		Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA	Red	1,8	2	2,2	V
			Green	2,8	3,2	3,4	
			Blue	2,8	3,2	3,4	
50% Power Angle				-	120	-	deg
Liminous Intensity	I <sub>V</sub>		Red	380	460	500	mcd
			Green	1400	1600	1800	
			Blue	250	300	400	
Dominant Wavelength	λ <sub>D</sub>		Red	620	625	630	
			Green	515	525	530	nm
			Blue	465	470	475	
Recommended Forward Current	I <sub>F(rec)</sub>			-	-	20	mA
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V		-	-	5	μA

### Notes:

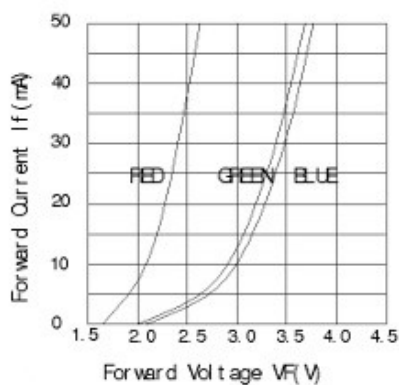
1. It's strongly recommended to limit die temperature to 55°C
2. Absolute maximum ratings  $T_a=25^\circ C$
3. Measurement Tolerances of Forward Voltage  $\pm 0.1V$
4. Measurement Tolerances of peak wavelength  $\pm 2.0nm$
5. Measurement Tolerances of luminous intensity  $\pm 15\%$
6. Measurement Tolerances of angle intensity  $\pm 15\%$

## Typical electrical and optical characteristics

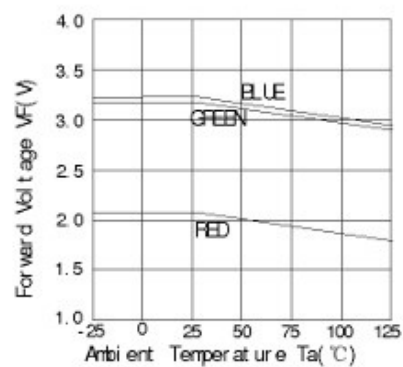
Forward Current vs. Ambient Temperature      Relative Intensity vs. Ambient Temperature



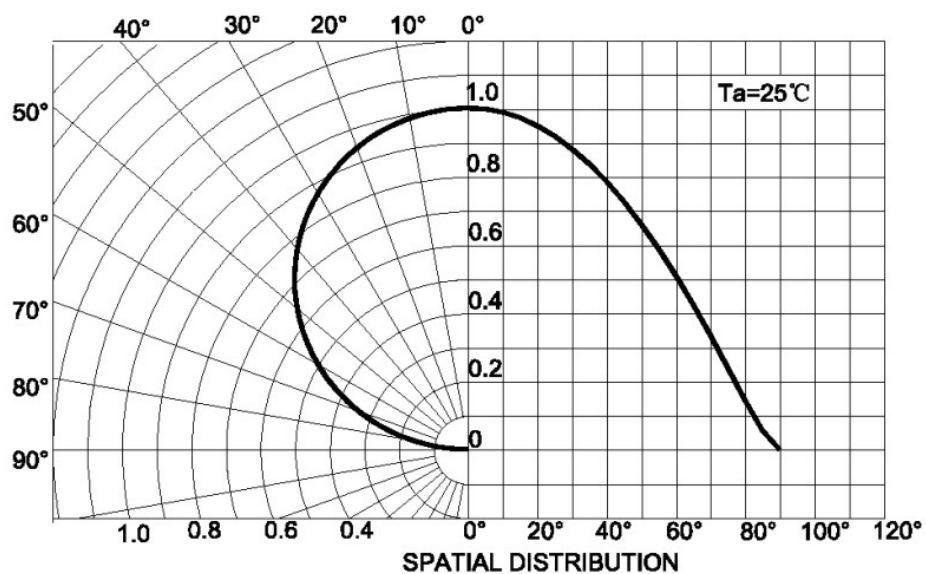
Forward Current vs. Forward Voltage



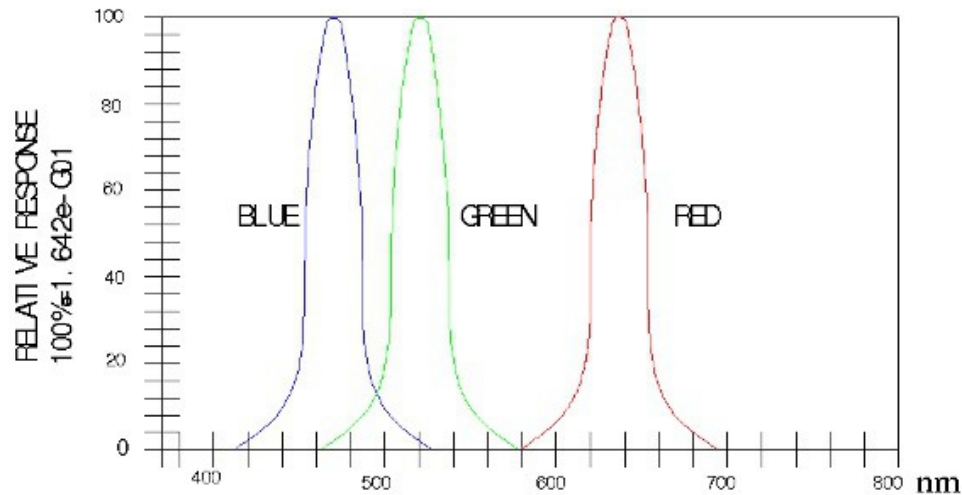
Forward Voltage vs. Ambient Temperature



## Spatial Distribution



## Spectrum



## 7. Warranty

- (1) Perform an acceptance inspection on arrival of the goods. Return the defectives if any stipulating the disqualification and quantity.
- (2) Embedding the LEDs into the application and the verification of life and other qualities in practical use shall be executed by user.
- (3) Do not use the LEDs for the applications that require the higher reliability and security and that may endanger life and health by the breakdown and the malfunction. Seller shall not bear any responsibility or liability with respect to any claims and damages caused by user's usage of the LEDs without following our intended purpose or any written consent.
- (4) Seller shall not bear responsibility for any damages or defects caused by improper operation at the current in excess of the absolute maximum ratings that are not covered by warranty.