

**Features:**

- Shape: square
- Widthxheight: 28.0mmx28.0mm
- High visibility
- Emitting Color: red,green,blue
- No of Built-in 5mm LED Lamps :
- Ultra orange - 3pcs,green – 5pcs ,blue – 1pcs.
- Waterproof Package With Hood Suitable
- For Outdoor and Indoor Information Boards

**Selection Guide**

Part No.	Description
FYCL-S28AR3G5B1	28mm square Lamp cluster 3 red ,5 green,1 blue,square packed

**Description:**

- Color Code & Chip characteristics: (Test Condition: IF=20mA)

Part No.	Built-in Lamp Package	Built-in Lamp Part No. FYL-	Chip		Lens Appearance	Electro-optical Data(At 20mA)			Viewing Angle 2 1/2 (deg)
			Material/ Emitted Color	Peak Wave Length p (nm)		Vf (V)		Iv (mcd)	
						Typ	Max	Typ	
FYCL-S28AR3G5 B1	4x5x7mm 1.0" Lead Oval	5063UEC	AlGaInP/ Ultra Orange	630	Water clear	2.10	2.50	750	X-X 45 Y-Y 25
		5063GC	GaP/GaP/ Green	570	Water clear	2.20	2.50	200	
		5063BC	GaN/SiC Blue	430	Water clear	3.80	4.50	500	

Notes:

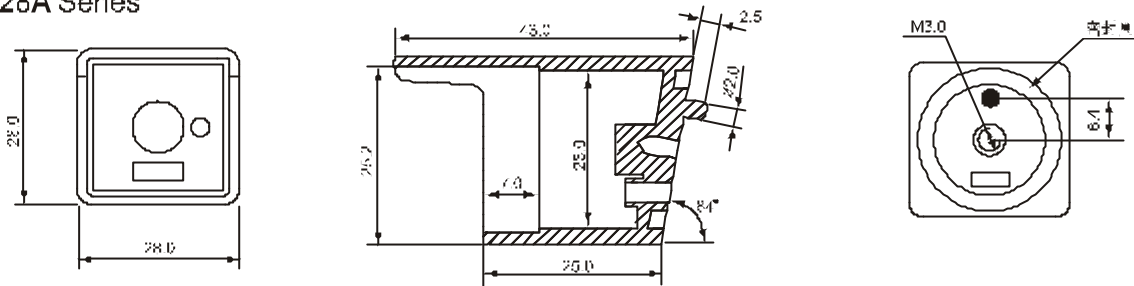
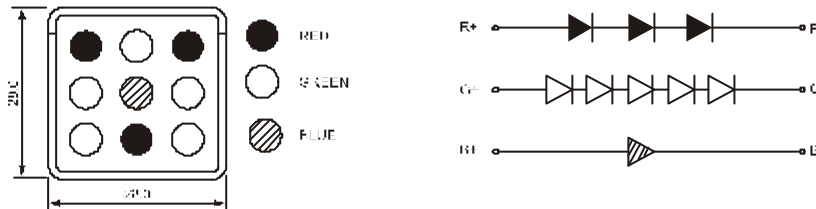
1. 1/2 Is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

**Absolute Maximum Rating (Each Lamp, Ta=25 Derate above 25 )**

Characteristic	Symbol	Ultra Orang	Green	Unit
Spectral Line Half width		17	30	nm
Pulse Forward Current	IFp	150	150	mA
DC Forward Current	IF	30	30	mA
Reverse Current	IR	20	20	uA
Power Dissipature	PD	65	80	mW
Operating Temperature	Topr	-40 -80	-40 -80	
Storage Temperature	Tstg	-40 -85	-40 -85	
Lead Soldering Temperature		260+5	260+5	

**Notes:**

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

**Package configuration & Internal circuit diagram:**
**FYCL-S28A Series**

**FYCL-S28AR3G5B1**

**Notes:**

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

**Electrical-optical characteristics: (Ta=25 )**

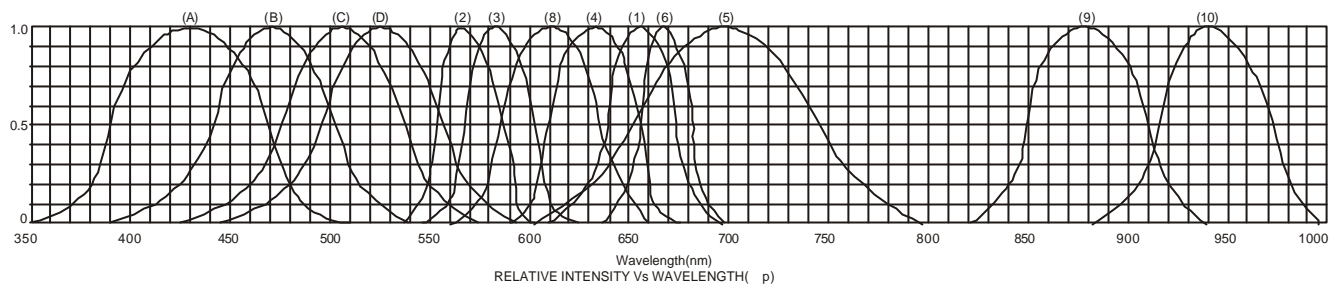
Parameter	Symbol	Ultra Orange	Green	Blue	Unit
Power Dissipation	$P_{ad}$	60	75	120	mW
Peak Forward Current*	$I_{pf}$	150	150	80	mA
Continuous Forward Current	$I_{af}$	25	30	25	mA

Notes:

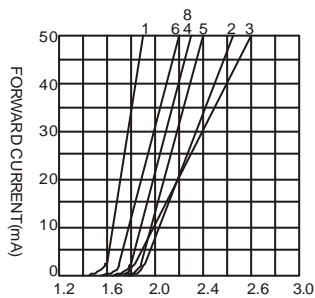
- \* Test Condition = Duty 0.1,10KHZ

**Absolute maximum ratings (Ta=25 )**

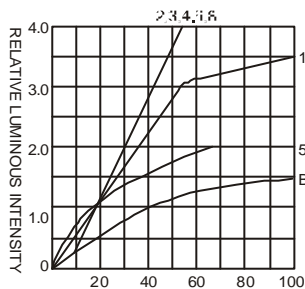
Reverse Voltage	5V
Reverse Current	20 $\mu$ A
Operating Temperature Range	-40 to+85
Storage Temperature Range	-40 to+85
Lead Solder Temperature (1.6mm(1/16")from body)	230 for 5 Seconds

**Typical electrical-optical characteristics curves:**


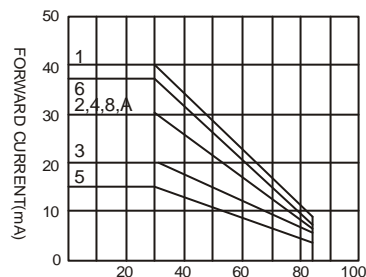
- |   |                                      |
|---|--------------------------------------|
| (1) - GaAsP/GaAs 655nm/Red                | (9) - GaAlAs 880nm                   |
| (2) - GaP 570nm/Yellow Green              | (10) - GaAs/GaAs & GaAlAs/GaAs 940nm |
| (3) - GaAsP/GaP 585nm/Yellow              | (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) - InGaAl/SiC 525nm/Ultra Green   |
| (8) - GaAsP/GaP 610nm/Super Red           |                                      |



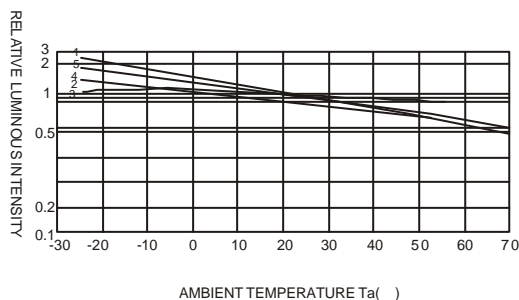
FORWARD VOLTAGE (Vf)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



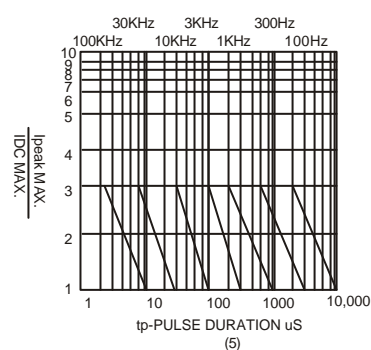
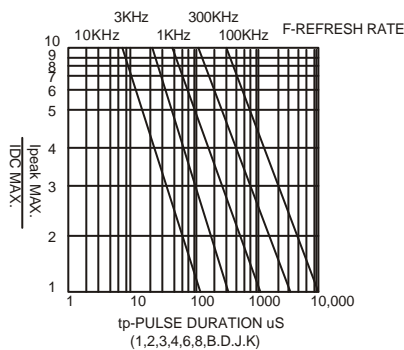
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



AMBIENT TEMPERATURE Ta( )  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta( )



NOTE:25 free air temperature unless otherwise specified