

# LED Alphanumeric Display

Part No. 08FY8013BD

LED NUMERIC DISPLAY

FYS-8013ABXX-XX

■ **Features:**

- 20.32mm (0.8") Single digit numeric display series
- Standard brightness
- Low current operation.
- Excellent character appearance.
- Easy mounting on P.C.boards or sockets.
- I.C.compatible.

■ **Part No.:**

Common Cathode	Iv TYP.(mcd)	Common Anode	Iv TYP.(mcd)
FYS-8013AH-XX	8.5	FYS-8013BH-XX	8.5
FYS-8013AS-XX	59.5	FYS-8013BS-XX	59.5
FYS-8013AD-XX	102	FYS-8013BD-XX	102
FYS-8013AUR-XX	204	FYS-8013BUR-XX	204
FYS-8013AE-XX	42.5	FYS-8013BE-XX	42.5
FYS-8013AY-XX	34	FYS-8013BY-XX	34
FYS-8013AG-XX	42.5	FYS-8013BG-XX	42.5

■ **Description:**

- Color Code & Chip characteristics: (Test Condition: IF=30mA)

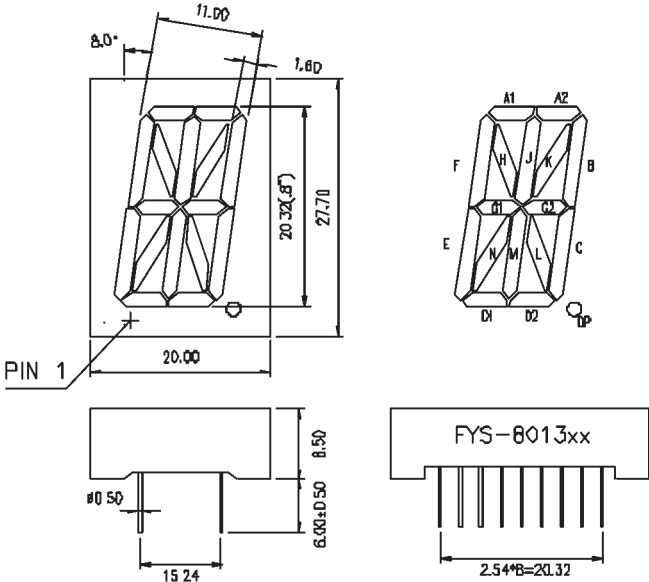
Emitting Color	Dice Material	Peak Wave Length ( $\lambda_p$ )	Spectral Line halfwidth( $\Delta \lambda/2$ )	Forward Voltage(VF) Unit:V		Luminous Intensity (Iv) Unit:ucd
				Typ	Max	
H Red	GaP/GaP	700nm	90nm	2.25	2.60	500
S Hi Red	GaAlAs/GaAs,SH	660nm	20nm	1.85	2.20	3500
D Super Red	GaAlAs/GaAs,DH	660nm	20nm	1.85	2.20	6000
UR Ultra Red	GaAlAs/GaAs,DD H	660nm	20nm	1.85	2.20	12000
E Orange	GaAsP/GaP	635nm	35nm	2.10	2.50	2500
Y Yellow	GaAsP/GaP	585nm	35nm	2.10	2.50	2000
G Green	GaP/GaP	570nm	30nm	2.20	2.50	2500

- -XX: Surface / Lens color:

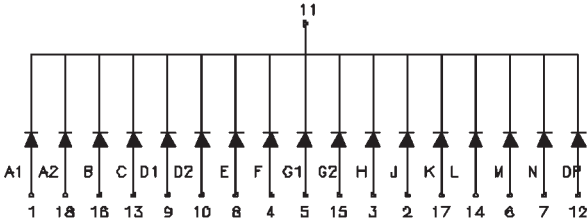
Number	0	1	3	3	4	5
Ref Surface Color	White	Black	Gray	Red	Green	
Epoxy Color	Water clear	White diffused	Red Diffused	Green Diffused	Yellow Diffused	

**Package configuration & Internal circuit diagram:**

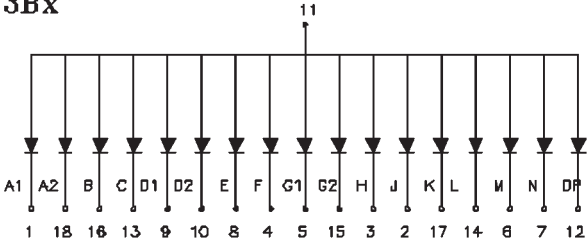
**FYS-8013 series**



**FYS-8013Ax**



**FYS-8013Bx**



**Notes:**

- All dimensions are in millimeters (inches)
- Tolerance is  $\pm 0.35(0.01)$  unless otherwise noted.
- Specifications are subject to change without notice.

**Electrical-optical characteristics: (Ta=35°C)**

Parameter	Symbol	GaP(Red)	AlGaAs	GaAsP	GaP(Green)	Unit
Power Dissipation	$P_{ad}$	40	60	80	80	mW
Peak Forward Current *	$I_{pf}$	50	150	150	150	mA
Continuous Forward Current	$I_{af}$	15	35	30	30	mA

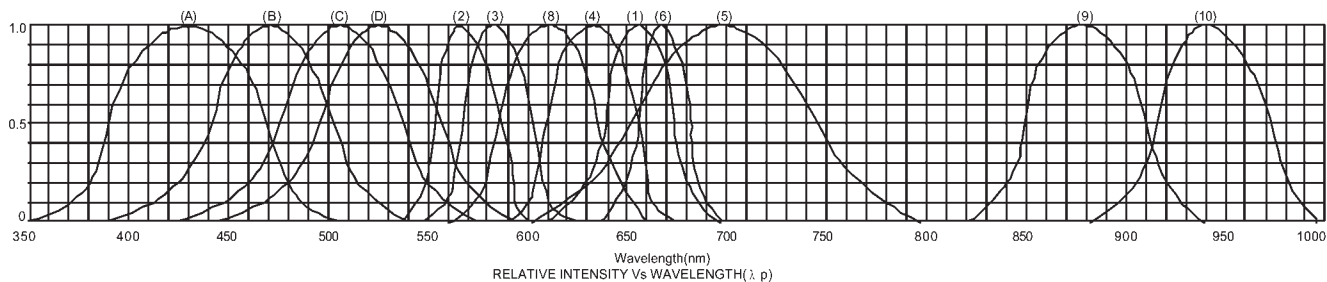
Notes:

- \* Test Condition = Duty 0.1,10KHZ

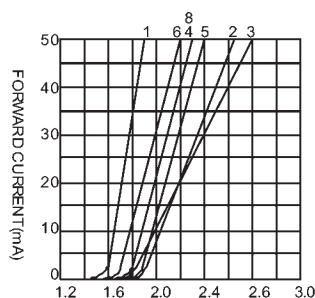
**■ Absolute maximum ratings (Ta=35°C)**

Reverse Voltage	5V
Reverse Current	30 $\mu$ A
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-40°C to +85°C
Lead Solder Temperature (1.6mm(1/16") from body) 330°C for 5 Seconds	

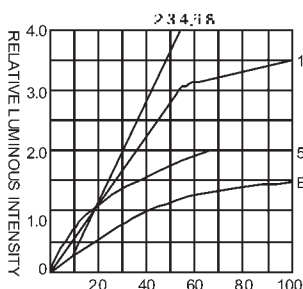
Typical electrical-optical characteristics curves:



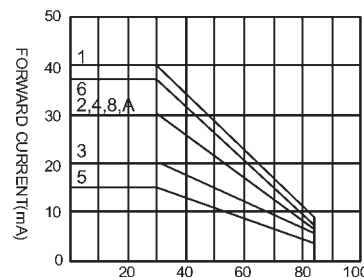
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) -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



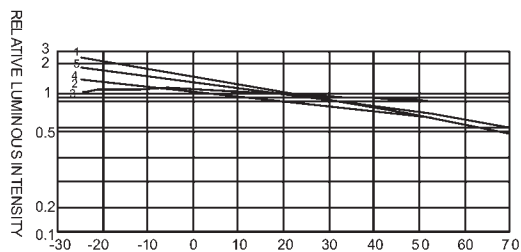
FORWARD VOLTAGE (V)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



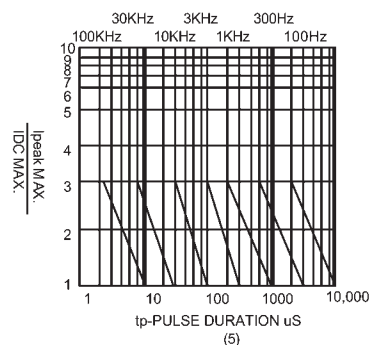
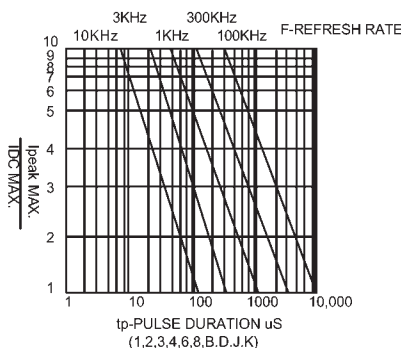
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



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



AMBIENT TEMPERATURE Ta( C)



NOTE:25 C free air temperature unless otherwise specified