



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

Part Number: APTF1616SEEZGQBDG

Hyper Red  
Green  
Blue

### Features

- 1.6mmX1.6mm SMT LED, 0.7mm thickness.
- Low power consumption.
- One red, one green and one blue chips in one package.
- Can produce any color in visible spectrum, including white light.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

### Description

The Hyper Red source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.

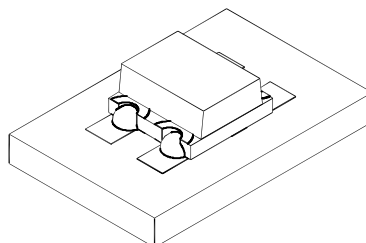
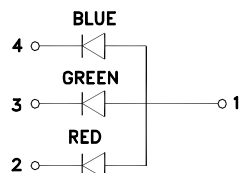
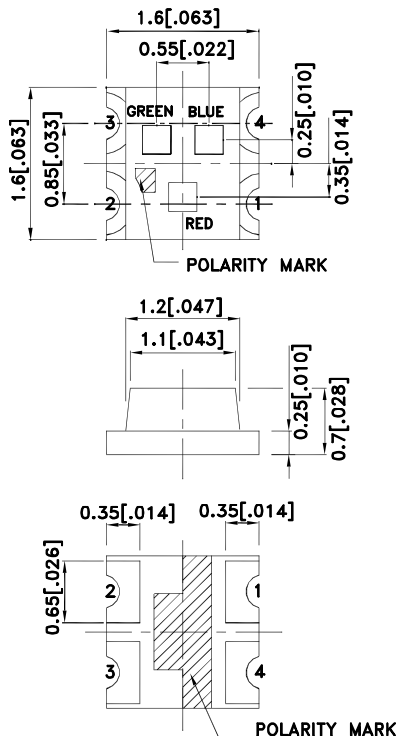
The Blue source color devices are made with InGaN Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.2(0.008)$  unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.



## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APTF1616SEEZGQBDC	Hyper Red (AlGaInP)	WATER CLEAR	180	400	120°
	Green (InGaN)		70	180	
	Blue (InGaN)		36	100	

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity/ luminous Flux: +/-15%.

## Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper Red Green Blue	630 515 468		nm	IF=20mA
λD [1]	Dominant Wavelength	Hyper Red Green Blue	621 525 470		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Hyper Red Green Blue	20 30 25		nm	IF=20mA
C	Capacitance	Hyper Red Green Blue	25 45 100		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Hyper Red Green Blue	2 3.3 3.3	2.5 4.1 4	V	IF=20mA
IR	Reverse Current	Hyper Red Green Blue		10 10 10	uA	VR=5V

Notes:

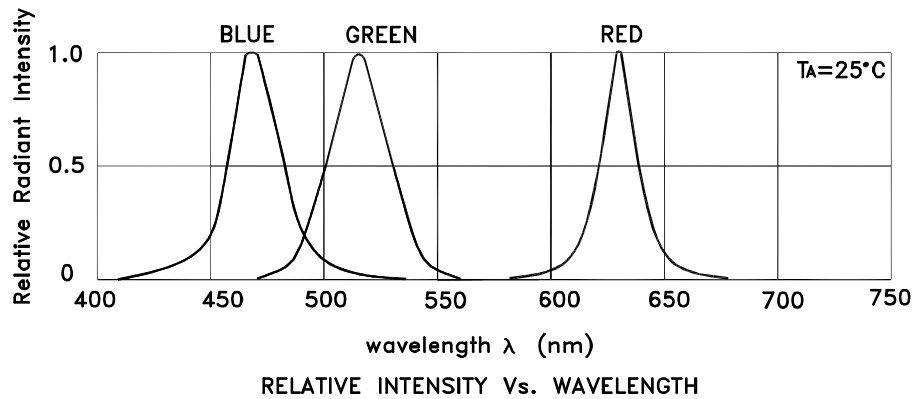
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

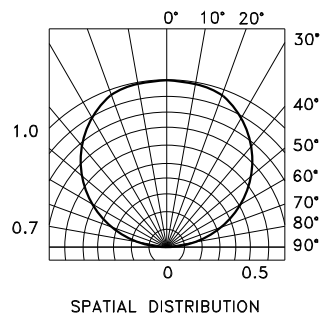
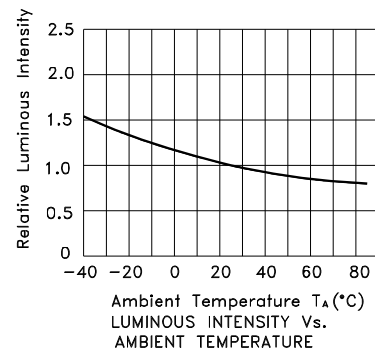
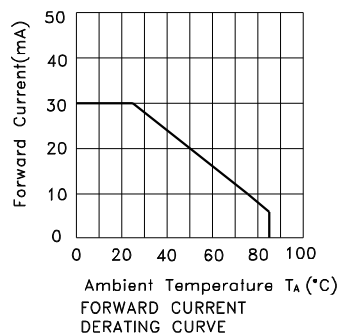
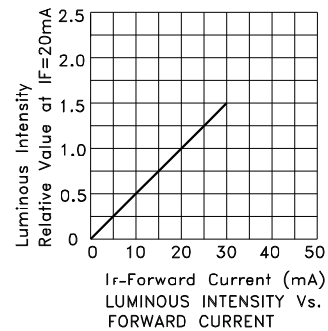
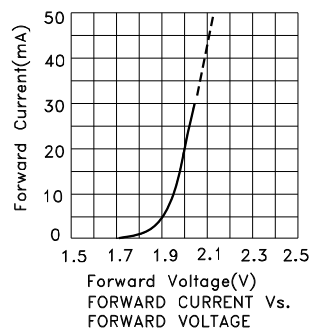
Parameter	Hyper Red	Green	Blue	Units
Power dissipation	75	102.5	120	mW
DC Forward Current	30	25	30	mA
Peak Forward Current [1]	195	150	150	mA
Reverse Voltage	5			V
Operating Temperature	-40°C To +85°C			
Storage Temperature	-40°C To +85°C			

Note:

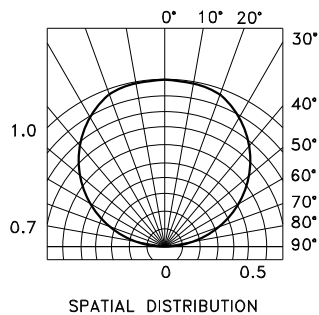
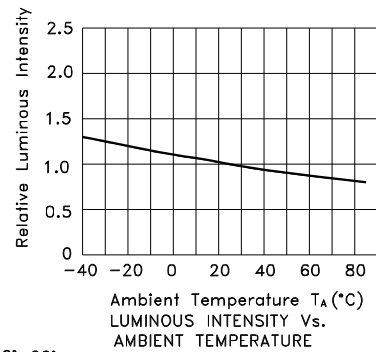
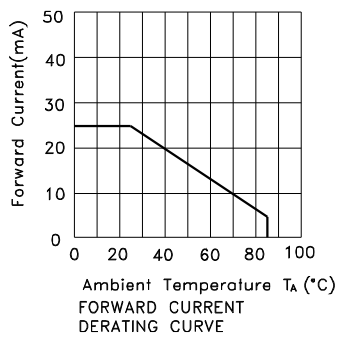
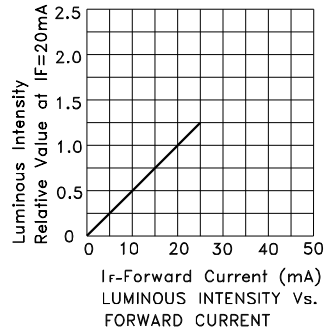
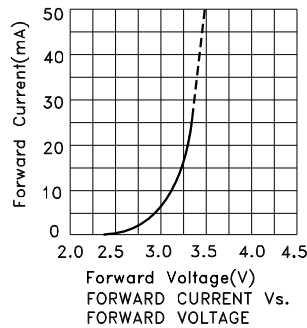
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



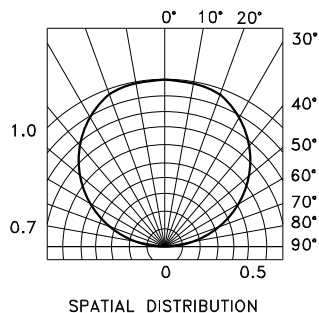
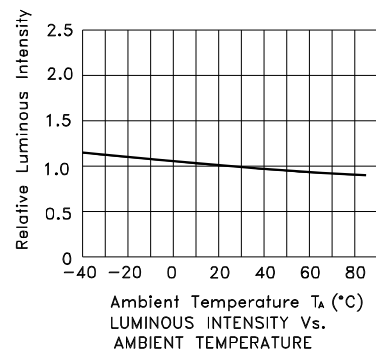
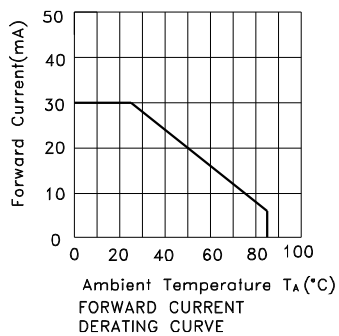
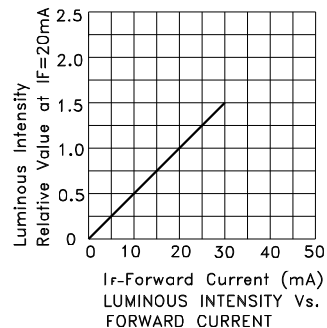
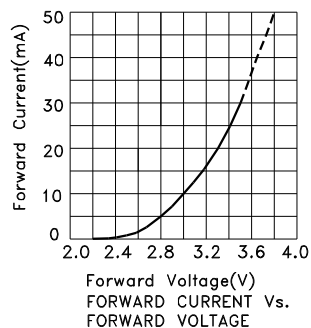
## APTF1616SEEZGQBDC Hyper Red



## Green



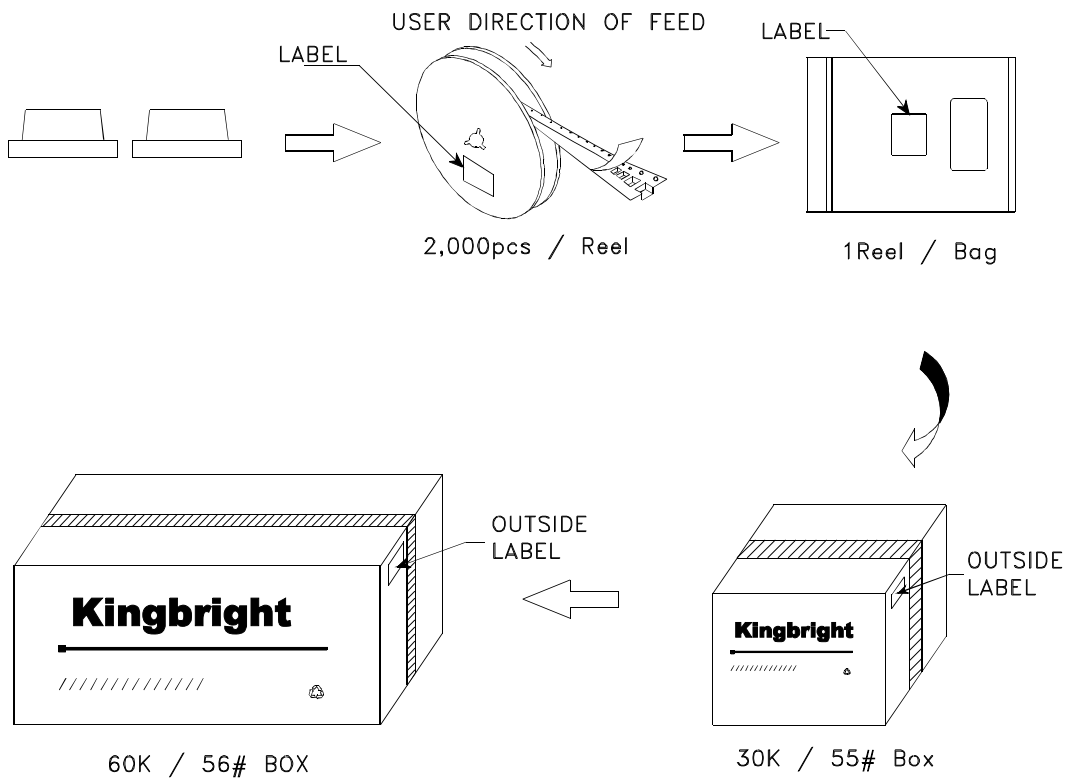
## Blue






PACKING & LABEL SPECIFICATIONS

APTF1616SEEZGQBDC



<b>Kingbright</b>	
P/NO: APTF1616xxx	
QTY: 2,000 pcs	Q.C. <div>Q C xx xx xxxx PASSED</div>
S/N: XXXX	
CODE: XXX	
LOT NO:	
 xxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	