

L383HDT BRIGHT RED	L383GDT GREEN
L383IDT HIGH EFFICIENCY RED	L383EDT ORANGE
L383SRx SUPER BRIGHT RED	L383YDT YELLOW
L383SGWT SUPER BRIGHT GREEN	

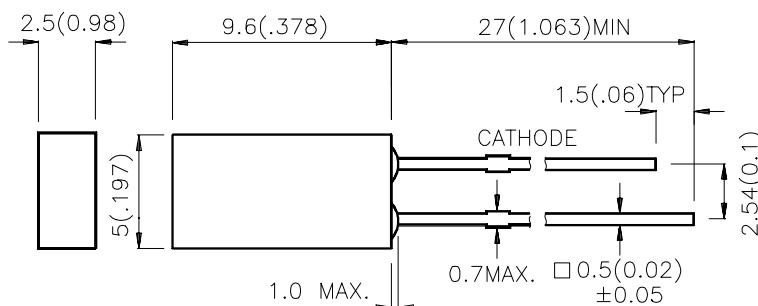
### Features

- LOW POWER CONSUMPTION.
- ULTRA BRIGHTNESS IS AVAILABLE.
- RELIABLE AND RUGGED.
- EXCELLENT UNIFORMITY OF LIGHT OUTPUT.
- SUITABLE FOR LEVEL INDICATOR.
- LONG LIFE - SOLID STATE RELIABILITY.

### Description

- The Bright Red source color devices are made with Gallium Phosphide Red Light Emitting Diode.
- The High Efficiency Red and Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.
- The Green and Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.
- The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.
- The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01")$  unless otherwise noted.
3. Lead spacing is measured where the lead emerge package.
4. Specifications are subject to change without notice.

## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 10 mA *20mA		Viewing Angle θ1/2
			Min.	Typ.	
L383HDT	BRIGHT RED (GaP)	RED DIFFUSED	0.5	1	110°
L383IDT	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	3	5	110°
L383EDT	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	3	5	110°
L383GDT	GREEN (GaP)	GREEN DIFFUSED	1	4	110°
L383YDT	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	1	4	110°
L383SRDT	SUPER BRIGHT RED (GaAlAs)	RED DIFFUSED	*40	*70	110°
L383SRWT		WHITE DIFFUSED	*40	*70	110°
L383SGWT	SUPER BRIGHT GREEN (GaP)	WHITE DIFFUSED	*8	*15	110°

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

2. \* Luminous intensity with asterisk is measured at 20mA.

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

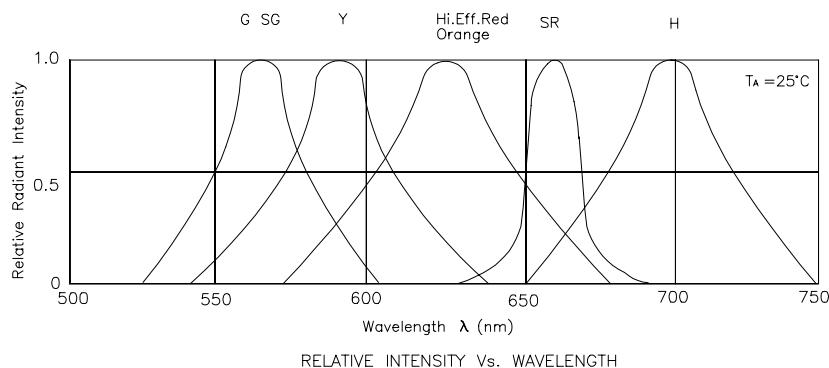
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green	700 627 627 565 590 660 565		nm	IF=20mA
λ D	Dominate Wavelength	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green	660 625 625 568 588 640 568		nm	IF=20mA
Δλ1/2	Spectral Line Halfwidth	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green	45 45 45 30 35 20 30		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green	40 15 15 15 20 45 15		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green	2.25 2.0 2.0 2.2 2.1 1.85 2.2	2.5 2.5 2.5 2.5 2.5 2.5 2.5	V	IF=20mA
I <sub>R</sub>	Reverse Current	All		10	uA	VR = 5V

## Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

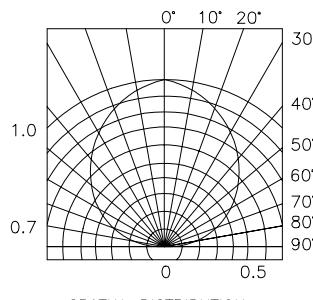
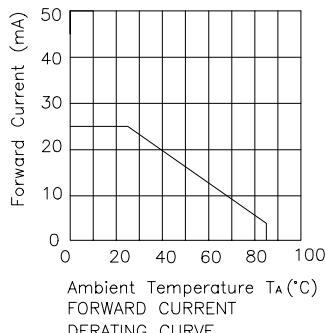
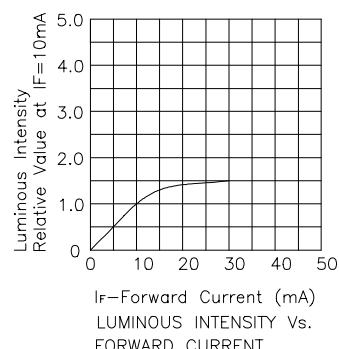
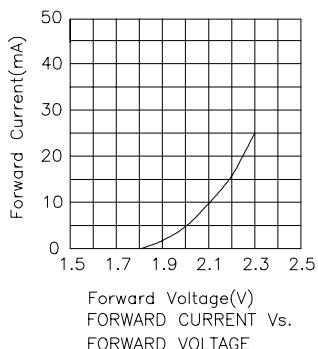
Parameter	Bright Red	High Efficiency Red	Orange	Green	Yellow	Super Bright Red	Super Bright Green	Units
Power dissipation	120	105	105	105	105	100	105	mW
DC Forward Current	25	30	30	25	30	30	25	mA
Peak Forward Current [1]	120	160	160	140	140	155	140	mA
Reverse Voltage	5	5	5	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C							
Lead Solder Temperature [2]	260°C For 5 Seconds							

Notes:

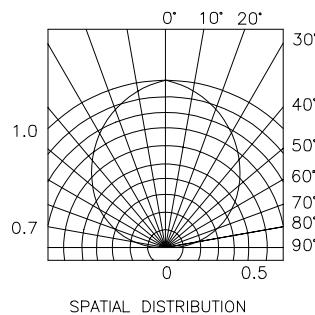
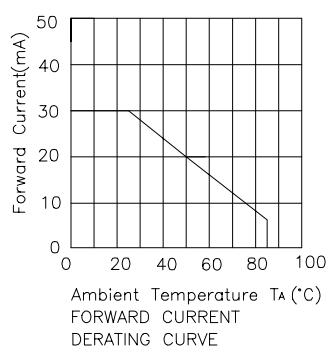
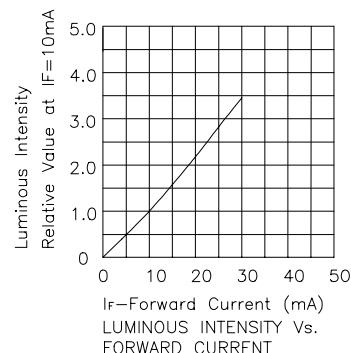
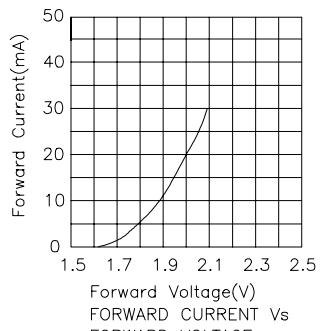
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 4mm below package base.



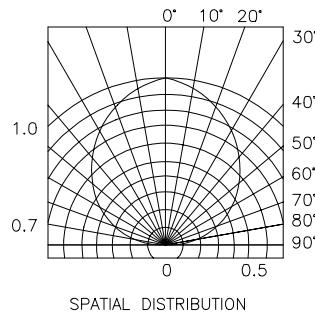
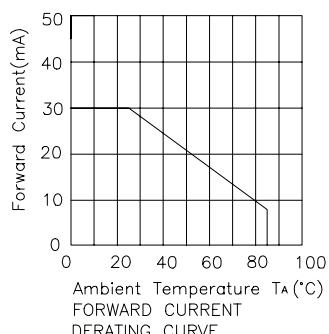
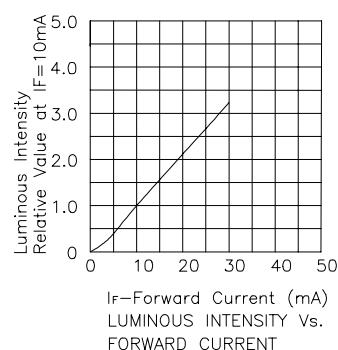
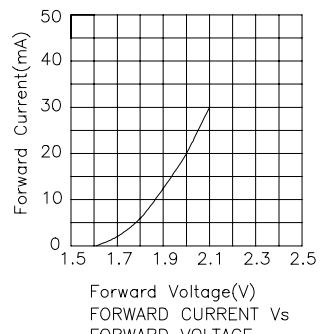
## Bright Red L383HDT



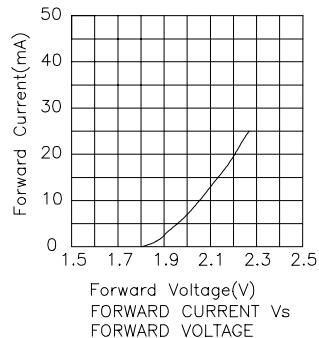
## High Efficiency Red L383IDT



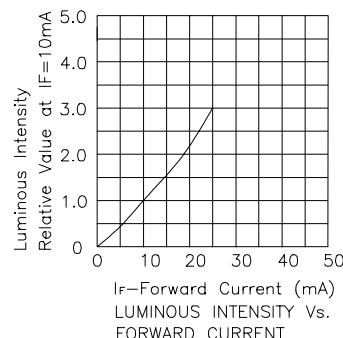
## Orange L383EDT



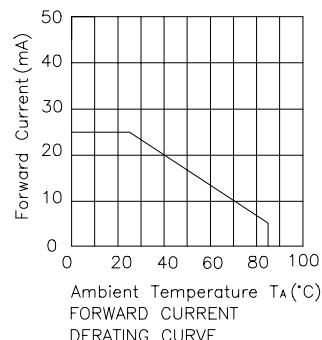
## Green L383GDT



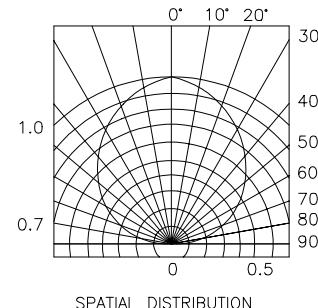
Forward Voltage(V)  
FORWARD CURRENT Vs.  
FORWARD VOLTAGE



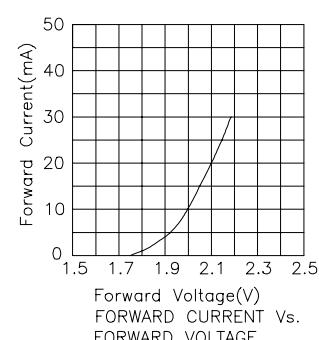
$I_F$ =Forward Current (mA)  
LUMINOUS INTENSITY Vs.  
FORWARD CURRENT



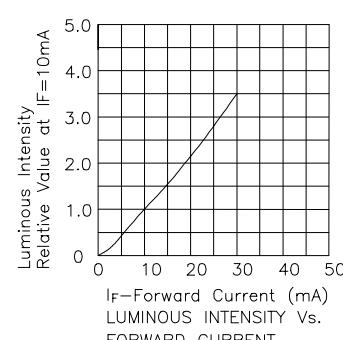
Ambient Temperature  $T_A$  (°C)  
FORWARD CURRENT  
DERATING CURVE



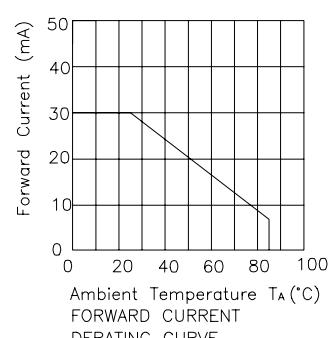
SPATIAL DISTRIBUTION



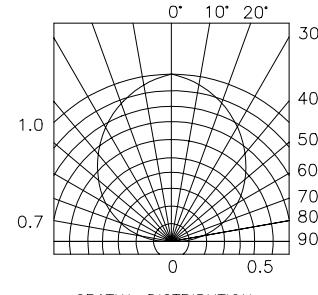
Forward Voltage(V)  
FORWARD CURRENT Vs.  
FORWARD VOLTAGE



$I_F$ =Forward Current (mA)  
LUMINOUS INTENSITY Vs.  
FORWARD CURRENT



Ambient Temperature  $T_A$  (°C)  
FORWARD CURRENT  
DERATING CURVE



SPATIAL DISTRIBUTION

## Super Bright Red L383SRDT,L383SRWT

