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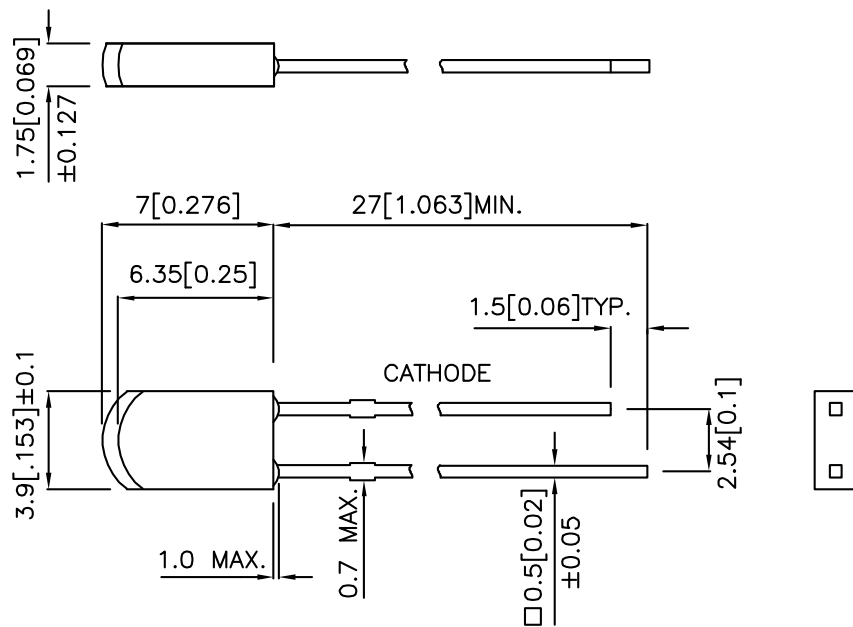WP1773ID   HIGH EFFICIENCY RED

Features

●LOW POWER CONSUMPTION.

●I.C. COMPATIBLE.

●ROUNDED END RECTANGULAR SHAPE.

●LONG LIFE-SOLID STATE RELIABILITY.

●RoHS COMPLIANT

Description

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

Package Dimensions

Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

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Selection Guide

| Part No. | Dice | Lens Type | Iv (mcd) @ 10mA | | Viewing Angle |
			Min.	Typ.	2 θ 1/2
WP1773ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	5	10	100°

Note:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
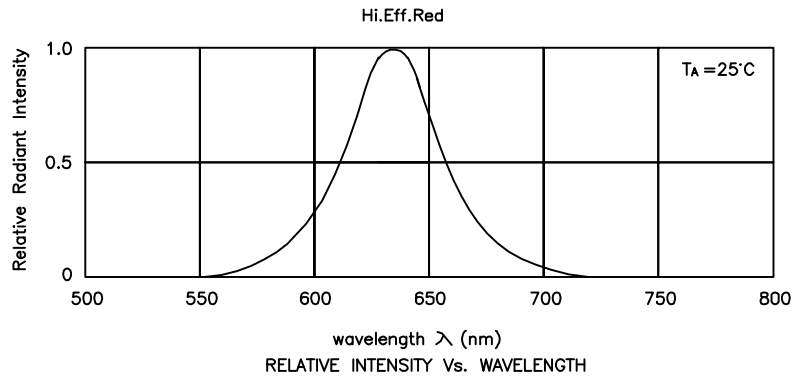
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	High Efficiency Red	627		nm	I_F=20mA
λD	Dominant Wavelength	High Efficiency Red	625		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	High Efficiency Red	45		nm	I_F=20mA
C	Capacitance	High Efficiency Red	15		pF	V_F=0V;f=1MHz
V_F	Forward Voltage	High Efficiency Red	2.0	2.5	V	I_F=20mA
I_R	Reverse Current	High Efficiency Red		10	uA	V_R = 5V

Absolute Maximum Ratings at T_A=25°C

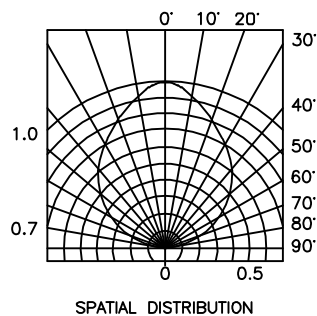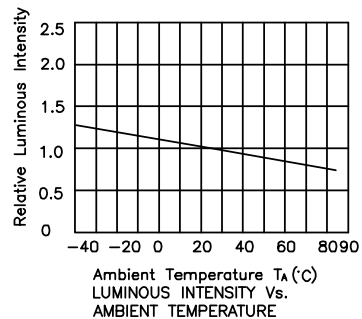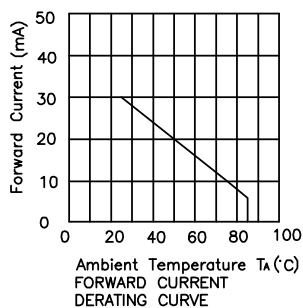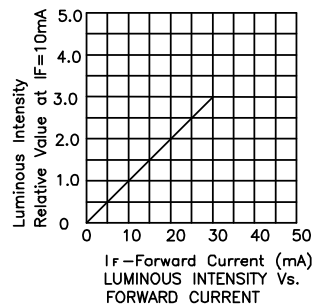| Parameter	High Efficiency Red	Units
Power dissipation	105	mW
DC Forward Current	30	mA
Peak Forward Current [1]	160	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [2]	260°C For 3 Seconds	
Lead Solder Temperature [3]	260°C For 5 Seconds	

Notes:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.

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Hi.Eff.Red

Relative Radiant Intensity

1.0

0.5

0

500   550   600   650   700   750   800

T$_A$ =25°C

wavelength λ (nm)
RELATIVE INTENSITY Vs. WAVELENGTH

High Efficiency Red   **WP1773ID**

Forward Current (mA)

50
40
30
20
10
0

1.5 1.7 1.9 2.1 2.3 2.5

Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE

Luminous Intensity
Relative Value at IF=10mA

5.0
4.0
3.0
2.0
1.0
0

0   10   20   30   40   50

I$_F$—Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT

Forward Current (mA)

50
40
30
20
10
0

0   20   40   60   80   100

Ambient Temperature T$_A$ (°C)
FORWARD CURRENT
DERATING CURVE

Relative Luminous Intensity

2.5
2.0
1.5
1.0
0.5
0

−40 −20 0   20   40   60   80 90

Ambient Temperature T$_A$ (°C)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

0°   10° 20°
30°
40°
50°
60°
70°
1.0
80°
0.7
90°

0   0.5

SPATIAL DISTRIBUTION

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm

2. Luminous Intensity: +/-15%

3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.