

W154A4SUKPBGKC

HYPER RED

BLUE / GREEN

Features

- UNIFORM LIGHT OUTPUT.
- LOW POWER CONSUMPTION.
- I.C. COMPATIBLE.
- LONG LIFE-SOLID STATE RELIABILITY.

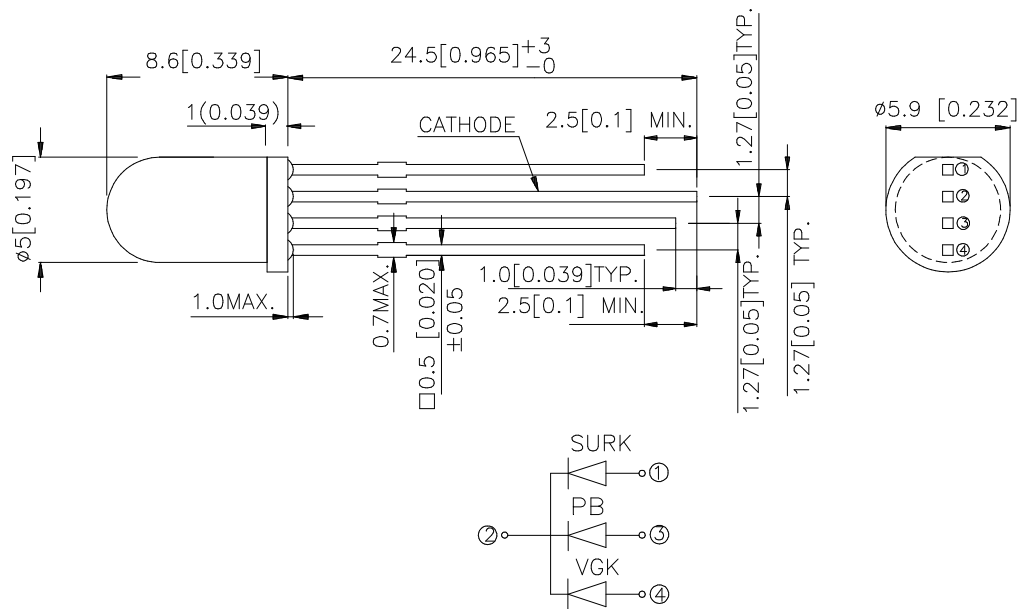
Description

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

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

The Green source color devices are made with InGaN on SiC 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) @ 20 mA | | Viewing Angle |
|-----------------|---------------------|-------------|---------------------|------|------------------|
| | | | Min. | Typ. | 2θ1/2 |
| W154A4SUKPBVGKC | HYPER RED (InGaAlP) | WATER CLEAR | 480 | 1000 | 50° |
| | BLUE (InGaN) | | 380 | 600 | |
| | GREEN (InGaN) | | 380 | 900 | |

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

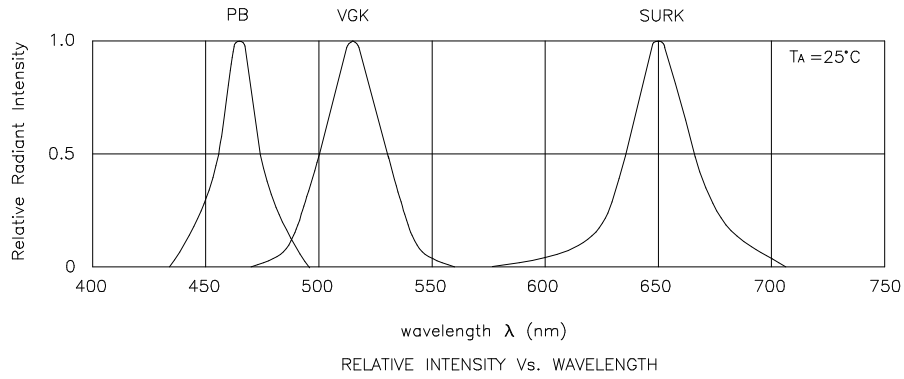
| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|-------------------|--------------------------|----------------------------|---------------------|-------------------|-------|---------------------------|
| λ _{peak} | Peak Wavelength | Hyper Red Blue Green | 650 468 515 | | nm | I _F =20mA |
| λ _D | Dominate Wavelength | Hyper Red Blue Green | 635 470 525 | | nm | I _F =20mA |
| Δλ _{1/2} | Spectral Line Half-width | Hyper Red Blue Green | 28 25 30 | | nm | I _F =20mA |
| C | Capacitance | Hyper Red Blue Green | 35 65 45 | | pF | V _F =0V;f=1MHz |
| V _F | Forward Voltage | Hyper Red Blue Green | 1.95 3.65 4.2 | 2.5 4.2 4.8 | V | I _F =20mA |
| I _R | Reverse Current | All | | 10 | μA | V _R = 5V |

Absolute Maximum Ratings at T_A=25°C

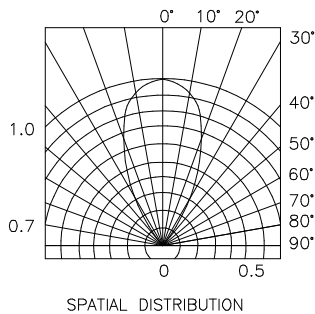
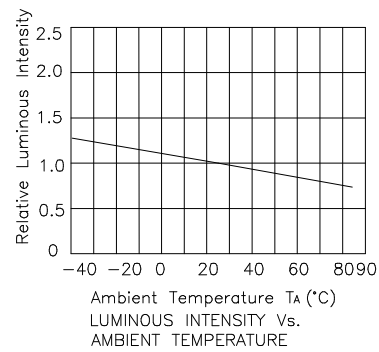
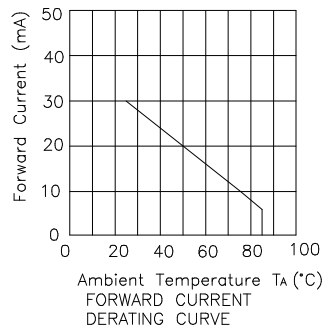
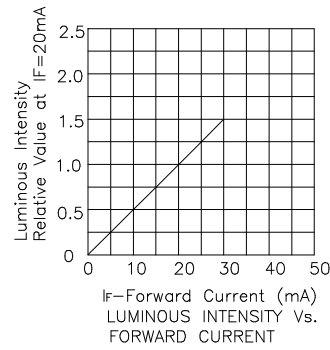
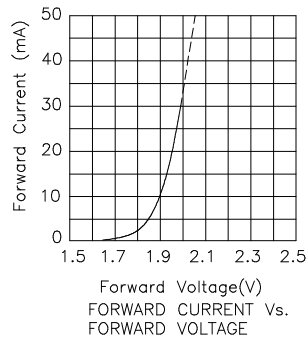
| Parameter | Hyper Red | Blue | Green | Units |
|---------------------------------|---------------------|------|-------|-------|
| Power dissipation | 170 | 102 | 105 | mW |
| DC Forward Current | 30 | 30 | 25 | mA |
| Peak Forward Current [1] | 185 | 160 | 130 | mA |
| Reverse Voltage | 5 | 5 | 5 | V |
| Operating / Storage Temperature | -40°C To +85°C | | | |
| Lead Solder Temperature [2] | 260°C For 5 Seconds | | | |

Notes:

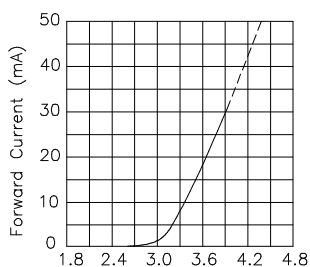
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 2mm below package base.



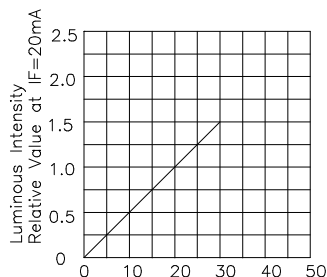
W154A4SUKPBVGKC Hyper Red



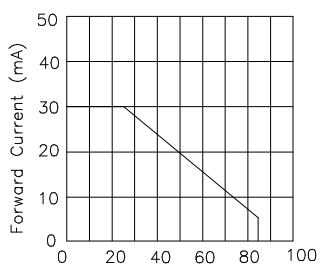
Blue



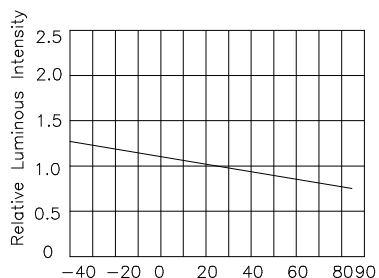
Forward Voltage(V)
FORWARD CURRENT vs.
FORWARD VOLTAGE



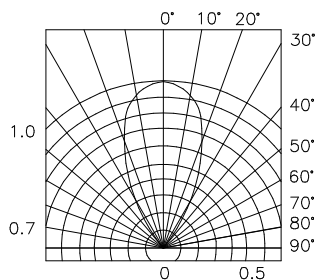
If-Forward Current (mA)
LUMINOUS INTENSITY vs.
FORWARD CURRENT



Ambient Temperature T_A (°C)
FORWARD CURRENT
DERATING CURVE

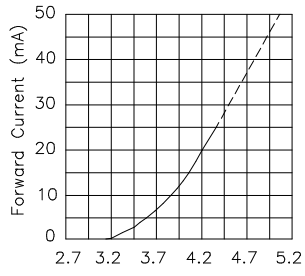


Ambient Temperature T_A (°C)
LUMINOUS INTENSITY vs.
AMBIENT TEMPERATURE

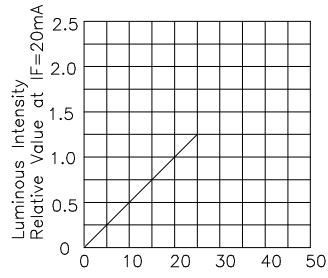


SPATIAL DISTRIBUTION

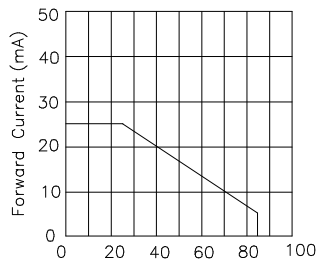
Green



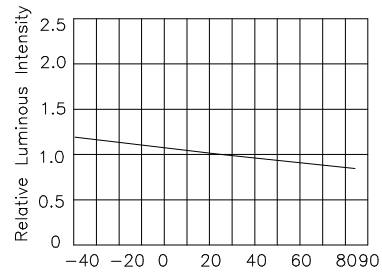
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



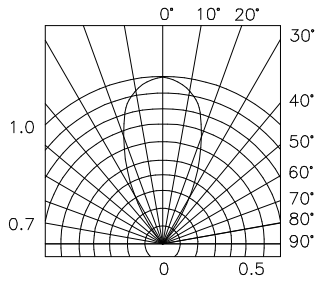
If-Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



Ambient Temperature Ta (°C)
FORWARD CURRENT
DERATING CURVE



Ambient Temperature Ta (°C)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

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