

# ВЫВОДНОЙ СВЕТОДИОД КРУГЛЫЙ

**ARL-3514EGW/3L**

## FEATURES

- Hi-Eff Red and Yellow Green chips are matched for uniform light output.
- Common cathode.
- T-1 type package.
- Long life solid state reliability.
- Low power consumption.
- Pb free.
- The product itself will remain within RoHS compliant version.

## DESCRIPTIONS

- The lamp contains two integral chips and is available bicolor.
- The Red and Yellow Green light is emitted by diodes of GaAsP/GaP and GaP respectively.
- White Diffused lens color.

## APPLICATIONS

- TV set.
- Monitor.
- Telephone.
- Computer.
- Circuit board.

## DEVICE SELECTION GUIDE

| LED Part No.          | CHIP             |               | Lens Color      |
|-----------------------|------------------|---------------|-----------------|
|                       | Material         | Emitted Color |                 |
| <b>ARL-3514EGW/3L</b> | <b>AlGaInP</b>   | <b>Red</b>    | <b>Diffused</b> |
|                       | <b>GaAsP/GaP</b> | <b>Green</b>  |                 |



3 mm



DIFFUSE



Red/Yellowish



### USAGE NOTES:

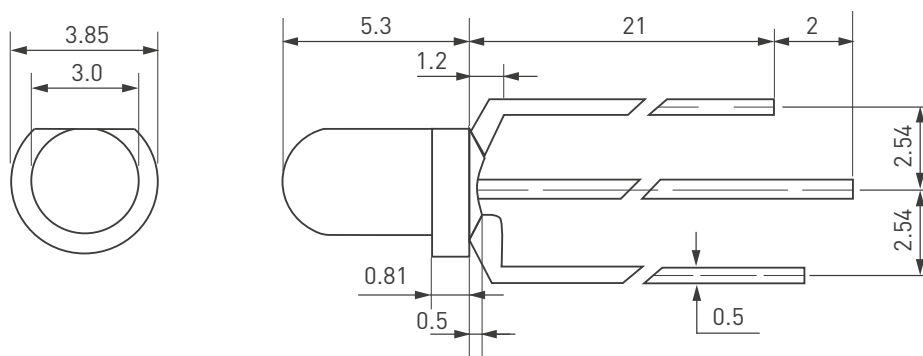
Surge will damage the LED.

When using LED, it must use a protective resistor in series with DC current about 18 mA.



**ATTENTION!**  
ELECTROSTATIC SENSITIVE DEVICES.  
OBSERVE PRECAUTIONS FOR HANDLING.

## PACKAGE DIMENSIONS



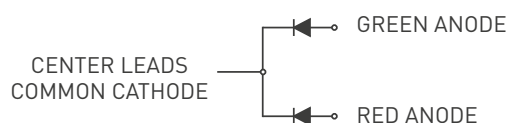
Unit: mm.

### Notes:

Other dimensions are in millimeters, tolerance is 0.25 mm except being specified.

Protruded resin under flange is 1.5 mm Max LED.

Bare copper alloy is exposed at tie-bar portion after cutting.



## ABSOLUTE MAXIMUM RATING ( $T_A = +25^\circ\text{C}$ )

| Parameter             | Symbol    | Absolute Maximum Rating | Unit             |
|-----------------------|-----------|-------------------------|------------------|
| Forward Pulse Current | $I_{FPM}$ | 70                      | mA               |
| Forward Current       | $I_{FM}$  | 30                      | mA               |
| Reverse Voltage       | $V_R$     | 5                       | V                |
| Power Dissipation     | $P_D$     | 140                     | mW               |
| Operating Temperature | $T_{opr}$ | -40... +80              | $^\circ\text{C}$ |
| Storage Temperature   | $T_{stg}$ | -40... +100             | $^\circ\text{C}$ |
| Soldering Heat (5s)   | $T_{sol}$ | 260                     | $^\circ\text{C}$ |

## ELECTRO-OPTICAL CHARACTERISTICS ( $T_A = +25^\circ\text{C}$ )

| Parameter                | Symbol          | Device | Min. | Typ. | Max. | Unit          | Test Condition    |
|--------------------------|-----------------|--------|------|------|------|---------------|-------------------|
| Luminous Intensity       | $I_v$           | Red    | 100  | 150  | 180  | mcd           | $I_f=20\text{mA}$ |
|                          |                 | Green  | 70   | 90   | 120  |               |                   |
| Viewing Angle            | $2\theta_{1/2}$ | Red    | 40   | —    | 60   | Deg           | (Note 1)          |
|                          |                 | Green  | 40   | —    | 60   |               |                   |
| Peak Emission Wavelength | $\lambda_p$     | Red    | 620  | 630  | 635  | nm            | $I_f=20\text{mA}$ |
|                          |                 | Green  | 565  | 570  | 575  |               |                   |
| Spectral Line Half-Width | $\Delta\lambda$ | Red    | 15   | 20   | 25   | nm            | $I_f=20\text{mA}$ |
|                          |                 | Green  | 15   | 20   | 25   |               |                   |
| Forward Voltage          | $V_F$           | Red    | 1.9  | —    | 2.3  | V             | $I_f=20\text{mA}$ |
|                          |                 | Green  | 1.9  | —    | 2.4  |               |                   |
| Reverse Current          | $I_R$           | Red    | —    | —    | 10   | $\mu\text{A}$ | $V_R=5\text{V}$   |
|                          |                 | Green  | —    | —    | 10   |               |                   |

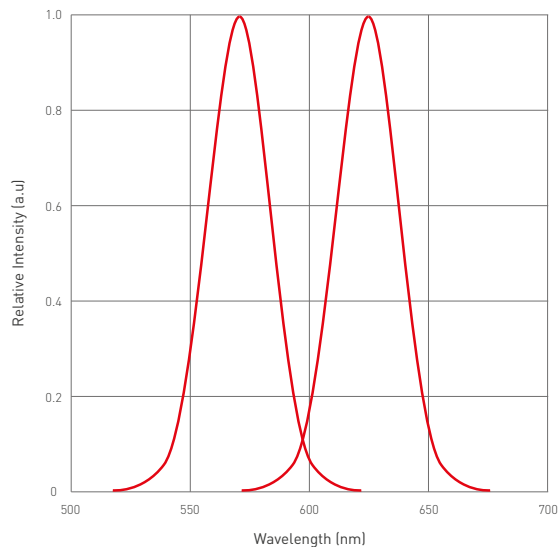
### Note:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.

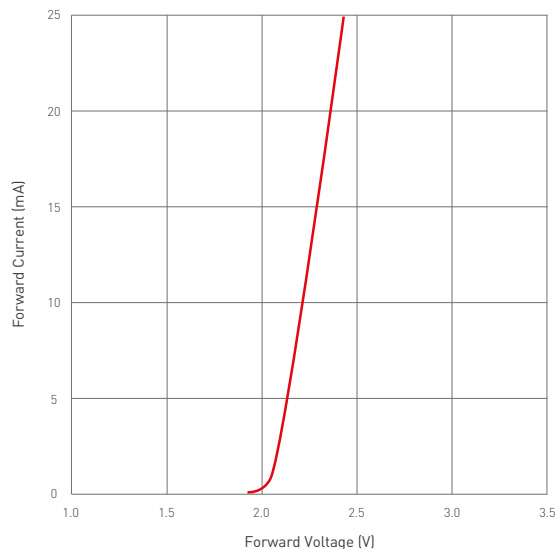
2.  $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

# TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES

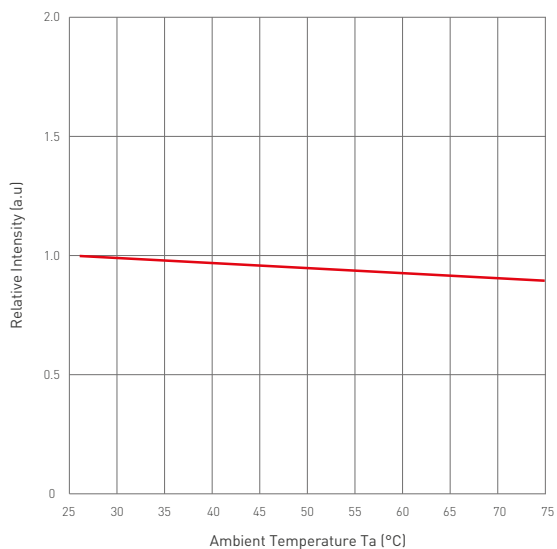
Relative Intensity VS Wavelength



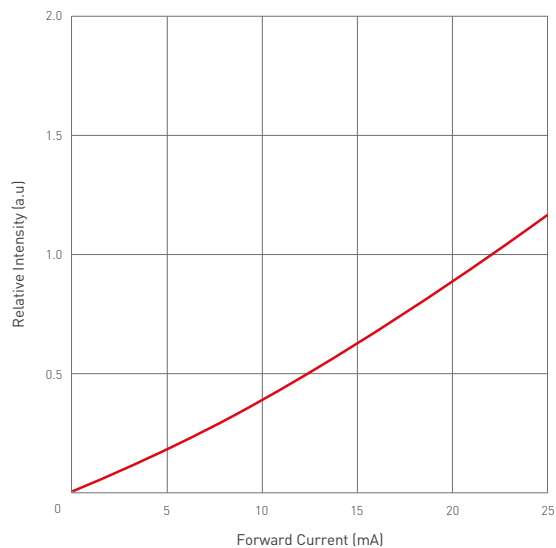
Forward Current VS Forward Voltage



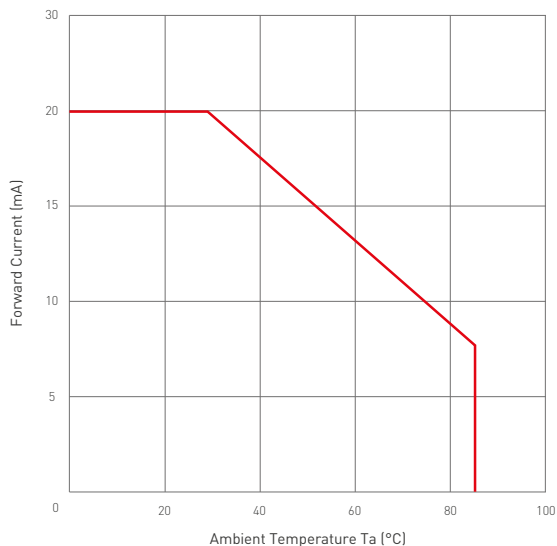
Relative Intensity VS Ambient Temp



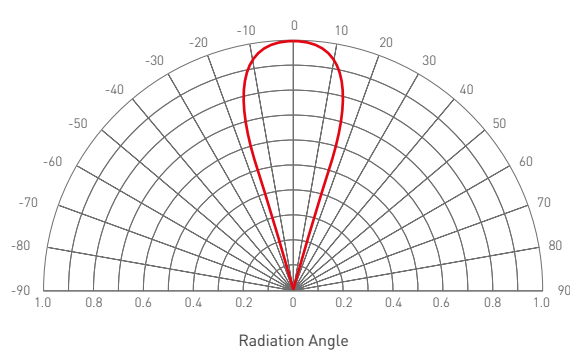
Forward Current VS Relative Intensity



Forward Current VS Ambient Temp



Radiation Characteristics



## NOTES

1. Above specification may be changed without notice. HYLEd will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. HYLEd assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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