# TX-R3A140-010G

# **PRODUCT SPECIFICATION**

Approved by: Checked by: Prepared by:

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### Notes:

- 1. Thermoelectric integrated Red chip packaged in this product.
- 2. All dimensions are in millimeters (inches).
- 3. Tolerance is ±0.25 mm (0.01") unless otherwise noted.

| Part NO.       | Lens Color  | Source Color |  |
|----------------|-------------|--------------|--|
| TX-R3A140-010G | Water Clear | Red          |  |

### Absolute Maximum Ratings at Ta=25

| Parameter  | Symbol           | MAX.                   | Unit     |
|--|------------------|------------------------|----------|
| LED Junction Temperature                                     | Tj               | 125                    |          |
| Power Dissipation  | P <sub>D</sub>   | 2170                   | mW       |
| Peak Forward Current<br>(1/10 Duty Cycle, 0.1ms Pulse Width) | I <sub>FP</sub>  | 1000                   | mA       |
| Continuous Forward Current                                   | IF               | 700                    | mA       |
| Reverse Voltage  | V <sub>R</sub>   | 5                      | V        |
| Electrostatic Discharge Threshold (ESD)                      | ESD              | 2000                   | V        |
| Operating Temperature Range                                  | T <sub>opr</sub> | -40 to +70             |          |
| Storage Temperature Range                                    | T <sub>spr</sub> | -40 to +100            |          |
| Lead Soldering Temperature                                   | Tsol             | Hand Soldering: 350 fo | r 8 sec. |

#### Notes:

- 1. Specifications are subject to change without notice.
- 2. Under the stipulated Characteristics parameters above, the life span of the LED is more than 50,000hours.
- 3. The data on this specification is for reference only and the actual data is in accordance with the acknowledgment.
- 4. Precautions for ESD:

STATIC SHIELD Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

## Characteristics at If=700mA, Vr=5V (Ta=25°C)

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| Doromator                                     | Cumbal            | Values |      |      | Unito |
|---|-------------------|--------|------|------|-------|
| Parameter                                     | Symbol            | Min.   | Тур. | Max. | Units |
| Luminous Flux                                 | φν                | 100    | 140  |      | lm    |
| Viewing Angle at 50 IV                        | 2θ <sub>1/2</sub> |        | 140  |      | Deg   |
| Peak Emission Wavelength                      | λр                | 625    | 630  | 635  | nm    |
| Dominant Wavelength                           | λd                | 618    | 620  | 628  | nm    |
| Spectral Line Half-Width                      | λ                 | 15     | 20   | 25   | nm    |
| Forward Voltage                               | V <sub>f</sub>    | 2.0    | 2.3  | 2.7  | V     |
| Reverse Current                               | I <sub>R</sub>    |        |      | 10   | μΑ    |
| Thermal Resistance Junction to Case           | Rθ <sub>J-C</sub> |        | 5.9  |      | K/W   |
| Temperature Coefficient of Forward<br>Voltage | V F/T             |        | -2   |      | mV/   |

#### Notes:

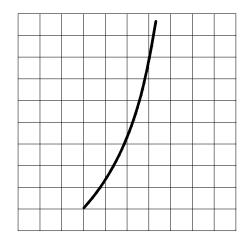
- 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- $2.\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity
- 3. The dominant wavelength ( $\lambda d$ ) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
- 4. Flux is measured with an accuracy of ±15%.
- 5. Forward voltage is measured with an accuracy of ±0.15V.

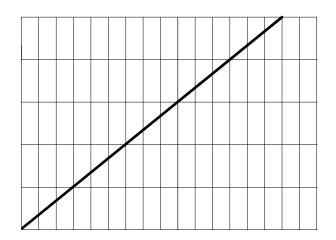
# Typical Electrical / Optical Characteristics Curves

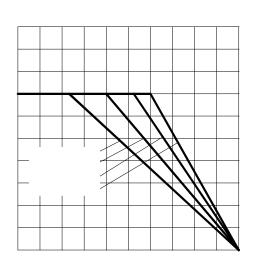
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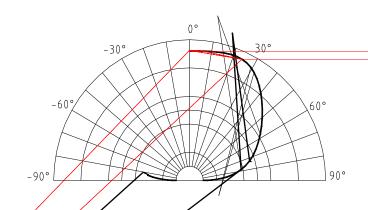
TYANSHINE

(25 Ambient Temperature Unless Otherwise Noted)









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