

Spec. No. : ODT-W010-106(1)

Issued Date : 2005. 09. 10.

# SPECIFICATION

MODEL NAME : Light Emitting Diode (RED&IRED)

MODEL NO. : OL6694TMF

Prepared by :

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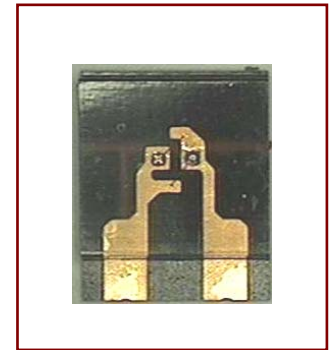
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## ■ Description

The **OL6694TMF** is high-power IRED & LED chips mounted in a low cost PCB package



## ■ Absolute Maximum Ratings

(Ta= 25℃)

| Parameter                | Symbol           | Ratings  |      | Unit |
|--------------------------|------------------|----------|------|------|
|                          |                  | RED      | IRED |      |
| Reverse Voltage          | V <sub>R</sub>   | 5        | 5    | V    |
| Forward Current          | I <sub>F</sub>   | 50       | 100  | mA   |
| Pulse Forward Current *1 | I <sub>FP</sub>  | 0.5      | 1    | A    |
| Power Dissipation        | P <sub>D</sub>   | 110      | 160  | mW   |
| Operating Temperature    | T <sub>OPR</sub> | -25 ~ 80 |      | ℃    |
| Storage Temperature      | T <sub>STG</sub> | -30 ~ 90 |      | ℃    |

\*1 : Pulse width tw=100us, T=10ms

## ■ Electro-Optical Characteristics

(Ta=25℃)

| Parameter              | Symbol         | Condi-<br>tions      | Min  |     | Typ  |     | Max  |     | Unit |
|------------------------|----------------|----------------------|------|-----|------|-----|------|-----|------|
|                        |                |                      | IRED | RED | IRED | RED | IRED | RED |      |
| Forward Voltage        | V <sub>F</sub> | I <sub>F</sub> =50mA | —    | —   | 1.25 | 2.0 | —    | —   | V    |
| Reverse Current        | I <sub>R</sub> | V <sub>R</sub> =5V   | —    | —   | —    | —   | 10   | 10  | μA   |
| Radiant Intensity      | P <sub>O</sub> | I <sub>F</sub> =50mA | —    | —   | 230  | 185 | —    | —   | μW   |
| Peak Wavelength        | λ <sub>p</sub> | I <sub>F</sub> =20mA | —    | —   | 940  | 660 | —    | —   | nm   |
| Spectral Bandwidth 50% | Δλ             | I <sub>F</sub> =20mA | —    | —   | 45   | 25  | —    | —   | nm   |

■ Typical electrical / Optical characteristic curves

( $T_a = 25^\circ\text{C}$ )

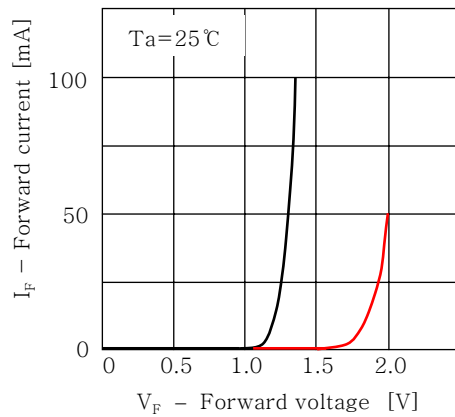


Fig.1 Forward Current vs. Forward Voltage

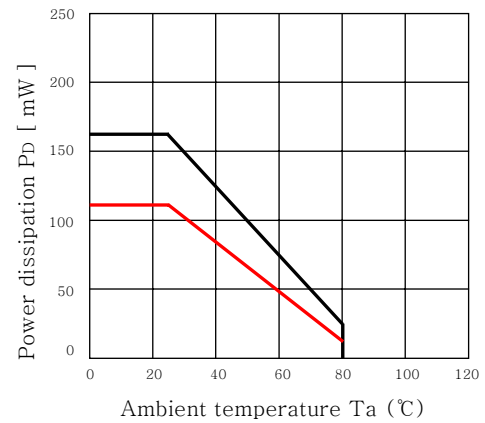


Fig.2 Power dissipation vs. Ambient temperature

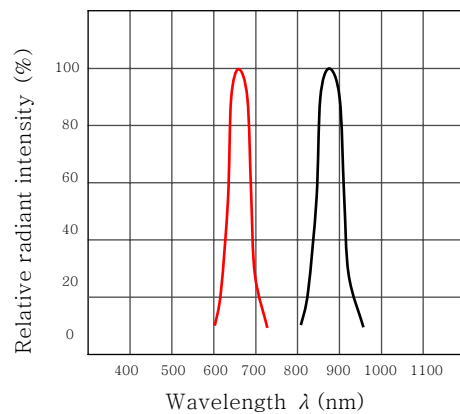


Fig.3 Relative spectra output

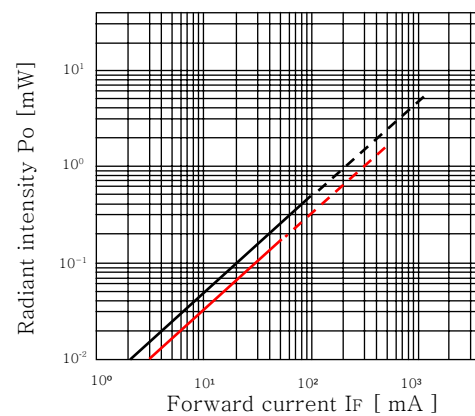
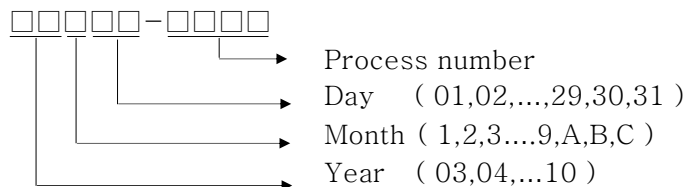


Fig.4 Radiant intensity vs. Forward current

### ■ Lot number

- The first five digits number shows lot number.
- The lot number is composed of the following characters;



### ■ Cleaning

- When washing is required, isopropyl alcohol should be used.
- The influence of ultrasonic cleaning on the optical detectors differs depending on factors such as oscillator output and how the optical detectors are mounted. Before cleaning by ultrasonic wave, testing should be performed to ensure this will not cause damage to the optical detectors.

### ■ Storage

- The optical detectors should be stored at 30°C or less and 70%R.H or less after being shipped from ODTech and the storage life limits are 3 months. If the optical detectors are stored for 3 months or more, they can be stored for a year in a sealed container with a nitrogen atmosphere and moisture absorbent material.
- ODTech optical detectors leads are comprised of a gold plated iron alloy. The gold surface may be affected by environments which contain corrosive gases and so on. Please avoid conditions which may cause the device to corrode, tarnish or discolor. This corrosion or discoloration may cause difficulty during soldering operations. It is recommended that the optical devices be used as soon as possible.
- Please avoid rapid transitions in ambient temperature, especially, in high humidity environments where condensation can occur.

# **Outline Dimensions**

(Unit : mm)

