

## Excellent Integrated System Limited

Stocking Distributor

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[Marktech Optoelectronics](#)

[MTMD6891T38](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

## Peak Emission Wavelength: 670nm, 850nm, 950nm, 1300nm

The MTMD6891T38 is a multi-chip emitter designed for applications requiring various emission sources in a small, densely packaged area. These devices can be custom designed for specific wavelengths and outputs.

### FEATURES

- > Hermetically Sealed Metal Can Pacakge
- > High Reliability
- > High Output Power

### APPLICATIONS

- > Medical Instrumentation
- > Currency Validation
- > Biofluorescence Analysis



## Absolute Maximum Ratings (Ta=25°C)



| ITEMS                        | SYMBOL | RATINGS    |     |     |      | UNIT |
|------------------------------|--------|------------|-----|-----|------|------|
|                              |        | 670        | 850 | 950 | 1300 |      |
| Forward Current (DC)         | IF     | 50         | 100 | 100 | 100  | mA   |
| Forward Current (Pulse)*1    | IFP    | 0.5        | 1   | 1   | 1    | A    |
| Reverse Voltage              | VR     | 5          |     |     |      | V    |
| Power Dissipation            | PD     | 110        | 180 | 190 | 100  | mW   |
| Operating Temperature Range  | Topr   | -20 ~ +80  |     |     |      | °C   |
| Storage Temperature Range    | Tstg   | -30 ~ +100 |     |     |      | °C   |
| Junction Temperature         | Tj     | 100        |     |     |      | °C   |
| Lead Soldering Temperature*2 | Tls    | 260        |     |     |      | °C   |

\*1: Tw=10μsec, T=10msec. \*2: Time 5 Sec max; Position: Up to 3mm from the body.

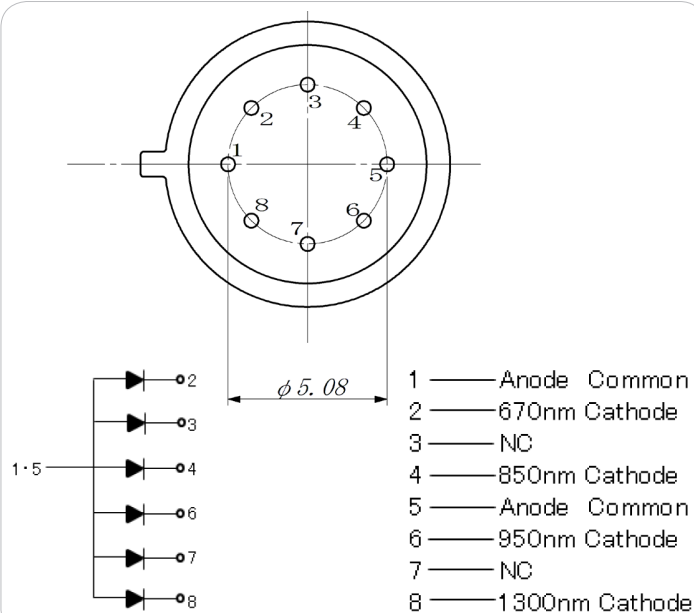
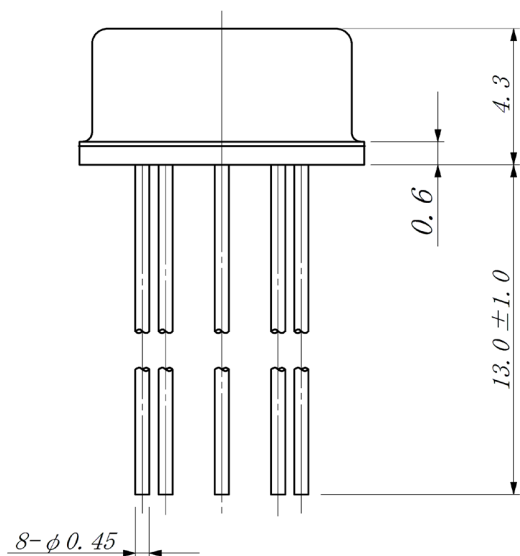
## Electrical & Optical Characteristics (Ta = 25°C)

| ITEMS                    | SYMBOL | WAVELENGTH | CONDITIONS | MIN | TYP  | MAX | UNIT |
|--------------------------|--------|------------|------------|-----|------|-----|------|
| Forward Voltage          | VF     | 670        | IF=20mA    | --  | 1.8  | 2.2 | V    |
| Forward Voltage          | VF     | 850        | IF=20mA    | --  | 1.45 | 1.8 | V    |
| Forward Voltage          | VF     | 950        | IF=20mA    | --  | 1.25 | 1.7 | V    |
| Forward Voltage          | VF     | 1300       | IF=20mA    | --  | 0.8  | 1.1 | V    |
| Reverse Current          | IR     |            | VR=5V      | --  | --   | 100 | μA   |
| Power Output             | PO     | 670        | IF=20mA    | --  | 3.1  | --  | mW   |
| Power Output             | PO     | 850        | IF=20mA    | --  | 2.7  | --  | mW   |
| Power Output             | PO     | 950        | IF=20mA    | --  | 7.2  | --  | mW   |
| Power Output             | PO     | 1300       | IF=20mA    | --  | 0.3  | --  | mW   |
| Peak Emission Wavelength | λp     | 670        | IF=20mA    | --  | 670  | --  | nm   |
| Peak Emission Wavelength | λp     | 850        | IF=20mA    | --  | 850  | --  | nm   |
| Peak Emission Wavelength | λp     | 950        | IF=20mA    | --  | 950  | --  | nm   |

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## Electrical & Optical Characteristics (Ta = 25°C) (Continued)

| ITEMS                    | SYMBOL          | WAVELENGTH | CONDITIONS | MIN | TYP  | MAX | UNIT |
|--------------------------|-----------------|------------|------------|-----|------|-----|------|
| Peak Emission Wavelength | $\lambda_p$     | 1300       | IF=20mA    | --  | 1300 | --  | nm   |
| Spectral Line Half Width | $\Delta\lambda$ | 670        | IF=20mA    | --  | 25   | --  | nm   |
| Spectral Line Half Width | $\Delta\lambda$ | 850        | IF=20mA    | --  | 35   | --  | nm   |
| Spectral Line Half Width | $\Delta\lambda$ | 950        | IF=20mA    | --  | 45   | --  | nm   |
| Spectral Line Half Width | $\Delta\lambda$ | 1300       | IF=20mA    | --  | 70   | --  | nm   |



Unit: mm, Tolerance:  $\pm 0.2$

