

# CYPT-F5E



## Detailed Product Description

|                               |               |                                  |                |
|-------------------------------|---------------|----------------------------------|----------------|
| <b>Product Name:</b>          | Infrared LEDs | <b>Diameter:</b>                 | Dip 5mm        |
| <b>Emitted Color:</b>         | IR            | <b>Peak Emission Wavelength:</b> | 850nm          |
| <b>Chip Material:</b>         | GaAlAs        | <b>Lens Type:</b>                | Black Diffused |
| <b>Forward Voltage @20ma:</b> | 1.1-1.4V      | <b>Viewing Angle:</b>            | 30 Deg         |
| <b>Current:</b>               | 20mA          | <b>Radiant Intensity:</b>        | 30mW/sr        |

5mm Round 30 degree Angle Infrared LED Transmitter IR LED Diodes

| Chip Material | Lens Color     | Source Color |
|---------------|----------------|--------------|
| GaAlAs        | Black Diffused | Infrared     |

- **Features:**

1. Standard T-1 3/4 diameter package.
2. Low forward voltage.
3. Viewing angle=30°.
4. Reliable and rugged.
5. The product itself will remain within RoHS complaint Version.

- **Descriptions:**

1. The device is spectrally matched with silicon photodiode and phototransistor.

- **Applications:**

1. Floppy disk drive.
2. Optoelectronic switch.
3. Camera.
4. Free air transmission system.
5. Video.

- **Absolute Maximum Ratings at Ta=25°C**

| Parameters   | Symbol | Max.                | Unit |
|--|--------|---------------------|------|
| Power Dissipation  | PD     | 70                  | mW   |
| Peak Forward Current<br>(1/10 Duty Cycle, 0.1ms Pulse Width) | IFP    | 1.00                | A    |
| Forward Current  | IF     | 120                 | mA   |
| Reverse Voltage  | VR     | 5                   | V    |
| Operating Temperature Range                                  | Topr   | -40°C to +80°C      |      |
| Storage Temperature Range                                    | Tstg   | -40°C to +100°C     |      |
| Soldering Temperature  | Tsld   | 260°C for 5 Seconds |      |

**Electrical Optical Characteristics at Ta=25°C**

| Parameters                   | Symbol | Min. | Typ. | Max. | Unit  | Test Condition                      |
|------------------------------|--------|------|------|------|-------|-------------------------------------|
| Radiant Intensity (Note 1) * | Ee     | ---  | 30.0 | ---  | mW/sr | IF=20mA                             |
|                              |        | ---  | 45.0 | --   |       | IF=50mA                             |
|                              |        | --   | 75   | --   |       | IF=100mA,<br>tp=100μs,<br>tp/T=0.01 |
| Viewing Angle (Note 2) *     | 2θ1/2  | ---  | 30   | ---  | Deg   | IF=20mA                             |
| Peak Emission Wavelength     | λp     | ---  | 850  | ---  | nm    | IF=20mA (Note 3)                    |
| Spectral Bandwidth           | Δλ     | ---  | 50   | ---  | nm    | IF=20mA                             |
| Forward Voltage              | VF     | 1.25 | 1.40 | 1.55 | V     | IF=20mA                             |
| Reverse Current              | IR     | ---  | ---  | 10   | μA    | VR=5V                               |