Description
Photoconductive cells are sensors that allow you to detect light. They are small, inexpensive, low-power, easy to use, and don’t wear out. NTEs light–dependent resistors (LDR) are photoresistors whose resistance decreases with increasing incident light intensity. In other words, when it is dark, they have a high electrical resistance and when it is light, their electrical resistance is low.

Features
- Epoxy Encapsulated
- Small Size
- Reliable Performance
- Quick Response
- High Sensitivity
- Good Characteristic of Spectrum

Typical Applications
Digital Applications
- Automatic Headlight Dimmer
- Night/Streetlight Control
- Photoelectric Control
- Industrial Control
- Security System

Analog Applications
- Camera Exposure Control
- Automatic Gain Control

Specifications
Maximum Voltage: 100VDC
Spectral Response Peak: 540nm
Ambient Temperature Range: −30°C to +70°C

<table>
<thead>
<tr>
<th>NTE Type</th>
<th>Power Dissipation (mW)</th>
<th>Light Resistance (10Lux)(KΩ)</th>
<th>Dark Resistance (MΩ)</th>
<th>( \gamma )</th>
<th>( \frac{100}{10} )</th>
<th>Response Times (ms)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>100</td>
<td></td>
<td>Increase</td>
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<td>50 - 100</td>
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<td>0.8</td>
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<td>02-LDR2</td>
<td>90</td>
<td>5 - 10</td>
<td>0.2</td>
<td>0.5</td>
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<td>02-LDR3</td>
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<td>100 - 200</td>
<td>10.0</td>
<td>0.9</td>
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</table>

Terms
- **Light Resistance:**
  Measured at 10Lux with standard light A (2854K color temperature) and 2H pre–illumination at 400–600Lux prior to testing.
- **Dark Resistance:**
  Measured 10 seconds after pulsed 10Lux.
- **Gamma Characteristic:**
  Between 10Lux and 100Lux and given by:
  \[
  T = \frac{\log (R_{10} / R_{100})}{\log(100 / 10)} = \log(R_{10} / R_{100})
  \]
  R10, R100 cell resistance at 10Lux and 100Lux. The error of \( T \) is ±0.1.