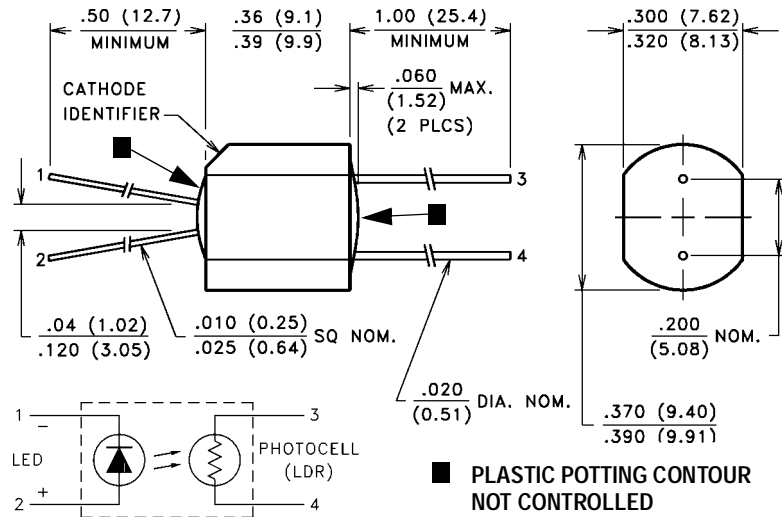


PACKAGE DIMENSIONS INCH (MM)



DESCRIPTION

VTL5C6 has a large dynamic range, high dark resistance, a low temperature coefficient of resistance, and a small light history memory. VTL5C7 is a shallow sloped device with good dynamic range, average temperature coefficient of resistance, speed of response, and light history memory.

ABSOLUTE MAXIMUM RATINGS @ 25°C

| | | | |
|--------------------------------|----------------|---|--------------------------------|
| Maximum Temperatures | | LED Forward Voltage Drop @ 20 mA: | 2.0V (1.65V Typ.) |
| Storage and Operating: | -40°C to 75°C | Min. Isolation Voltage @ 70% Rel. Humidity: | 2500 VRMS |
| Cell Power: | 175 mW | Output Cell Capacitance: | 5.0 pF |
| Derate above 30°C: | 3.9 mW/°C | Cell Voltage: | 250V (VTL5C6), 50V (VTL5C7) |
| LED Current: | 40 mA 1 | Input - Output Coupling Capacitance: | 0.5 pF |
| Derate above 30°C: | 0.9 mA/°C | | |
| LED Reverse Breakdown Voltage: | 3.0 V | | |

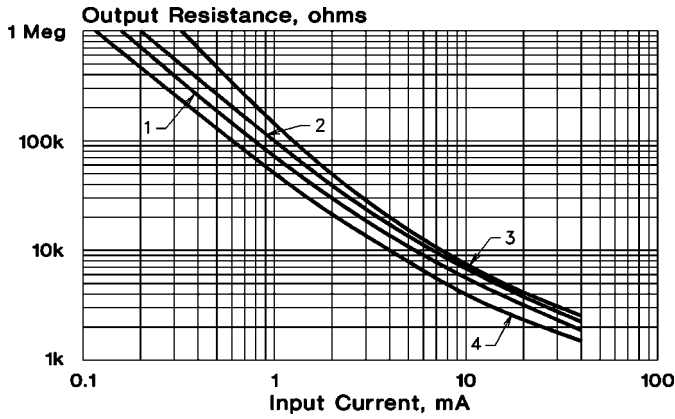
ELECTRO-OPTICAL CHARACTERISTICS @ 25°C

| Part Number | Material Type | ON Resistance 2 | | OFF 3 Resistance @ 10 sec. (Min.) | Slope (Typ.) @ 0.5 mA R @ 5 mA | Dynamic Range (Typ.) $\frac{R_{DARK}}{R @ 20 mA}$ | Response Time 4 | | | |
|-------------|---------------|------------------------|------------------------|--|--------------------------------|---|--------------------------------------|----------------------------|--------|-------|
| | | Input current | Dark Adapted (Typ.) | | | | Turn-on to 63% Final R_{ON} (Typ.) | Turn-off (Decay) to (Max.) | | |
| | | | | | | | | 1 MΩ | 100 kΩ | |
| VTL5C6 | 0 | 1 mA 10 mA 40 mA | 75 kΩ 10 kΩ 2 kΩ | 100 MΩ | 16.7 | 88 db | 3.5 ms | 50 ms | | |
| VTL5C7 | 7 | 0.4 mA 2 mA | 5 kΩ 1.1 kΩ | 1 MΩ | 5.7 | 75 db | 6.0 ms | | | 1 sec |

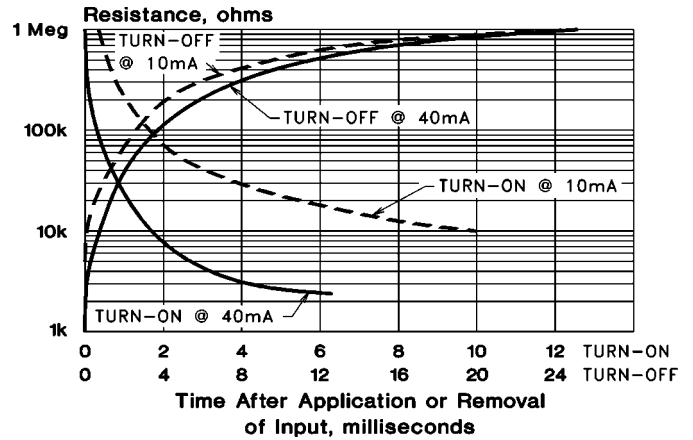
Refer to Specification Notes, page 41.

Typical Performance Curves

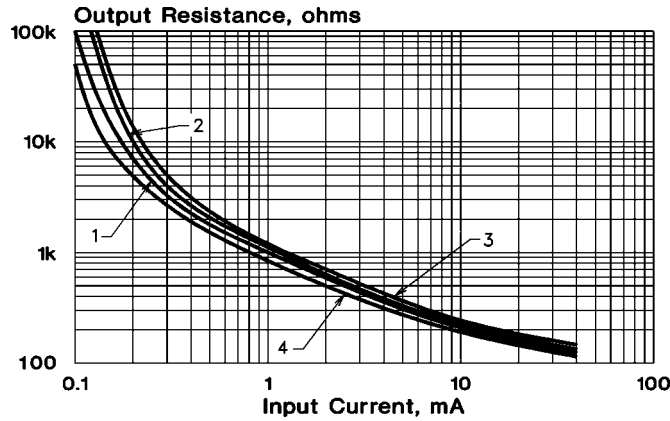
Output Resistance vs. Input Current
VTL5C6



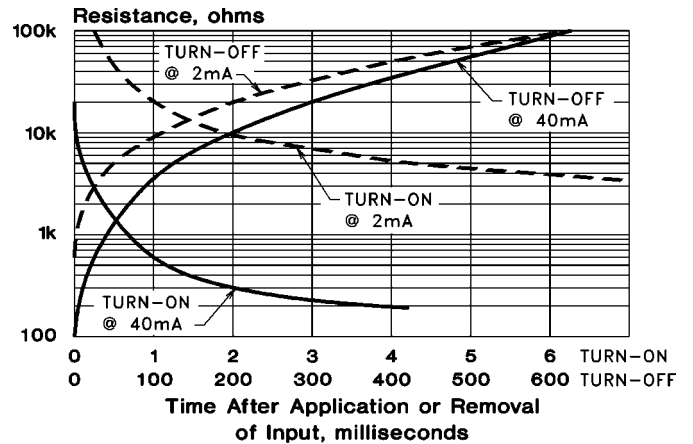
Response Time
VTL5C6



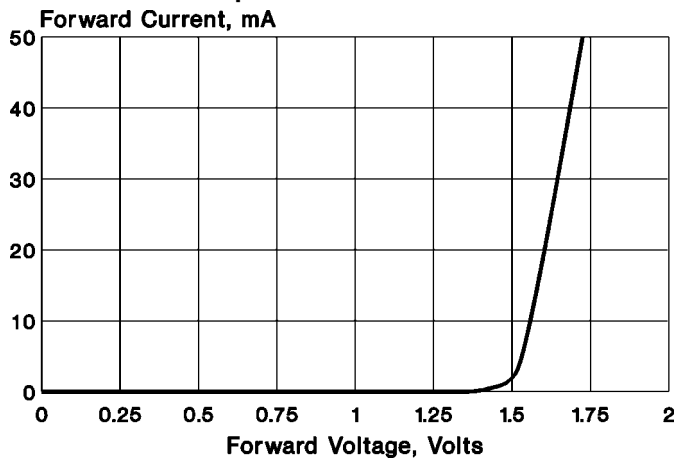
Output Resistance vs. Input Current
VTL5C7



Response Time
VTL5C7



Input Characteristics



Notes:

- At 1.0 mA and below, units may have substantially higher resistance than shown in the typical curves. Consult factory if closely controlled characteristics are required at low input currents.
- Output resistance vs input current transfer curves are given for the following light adapt conditions:
 - 25°C — 24 hours @ no input
 - 25°C — 24 hours @ 40 mA input
 - +50°C — 24 hours @ 40 mA input
 - 20°C — 24 hours @ 40 mA input
- Response time characteristics are based upon test following adapt condition (2) above.