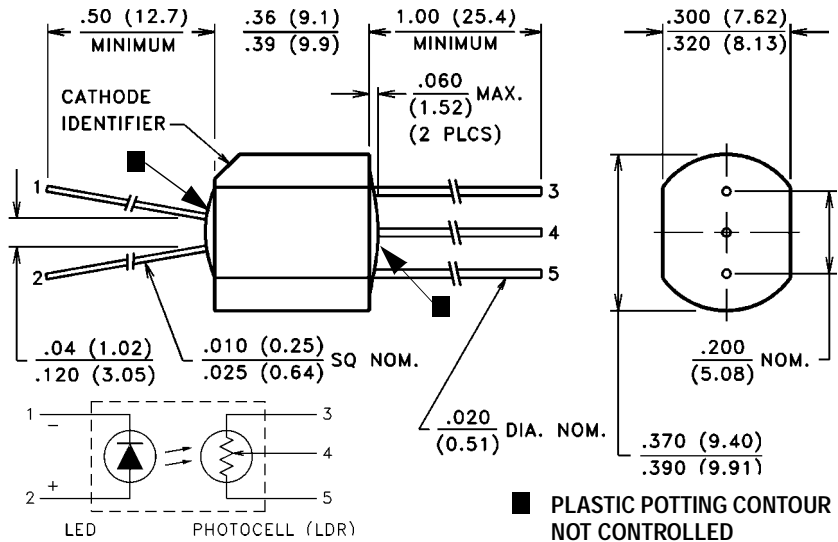


## PACKAGE DIMENSIONS INCH (MM)



## DESCRIPTION

VTL5C4/2 features a very low "on" resistance, fast response time, with a smaller temperature coefficient of resistance than VTL5C1.

## 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:                               | 30V               |
| LED Current:                   | 40 mA <b>1</b> | Input - Output Coupling Capacitance:        | 0.5 pF            |
| Derate above 30°C:             | 0.9 mA/°C      |   |                   |
| LED Reverse Breakdown Voltage: | 3.0 V          |   |                   |

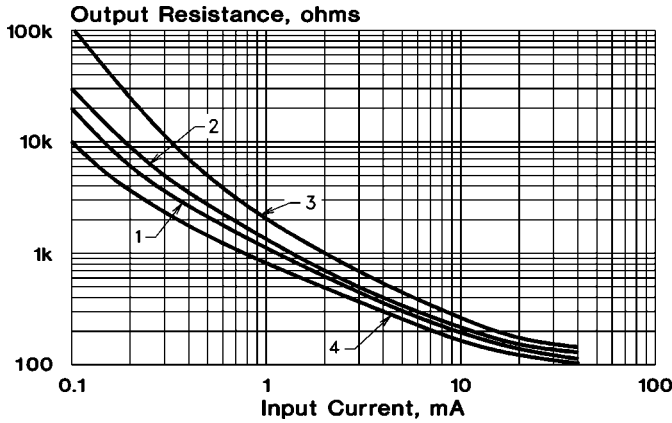
## ELECTRO-OPTICAL CHARACTERISTICS @ 25°C

| Part Number | Material Type | ON Resistance <b>2</b> |                     | OFF <b>3</b> Resistance @ 10 sec. (Min.) | Slope (Typ.) @ 0.5 mA / R @ 5 mA | Dynamic Range (Typ.) $\frac{R_{DARK}}{R @ 20 mA}$ | Response Time <b>4</b>               |                                   |
|-------------|---------------|------------------------|---------------------|--|----------------------------------|---|--------------------------------------|-----------------------------------|
|             |               | Input current          | Dark Adapted (Typ.) |  |                                  |   | Turn-on to 63% Final $R_{ON}$ (Typ.) | Turn-off (Decay) to 100 kΩ (Max.) |
| VTL5C4/2    | 4             | 1 mA<br>10 mA          | 1.5 kΩ<br>150 Ω     | 400 Ω                                    | 8.3                              | 68 db   | 6.0 ms                               | 1.5 sec                           |

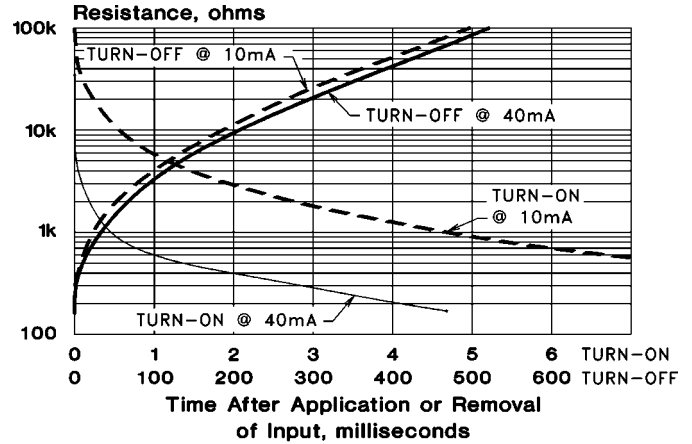
Refer to Specification Notes, page 41.

# Typical Performance Curves (Per Element)

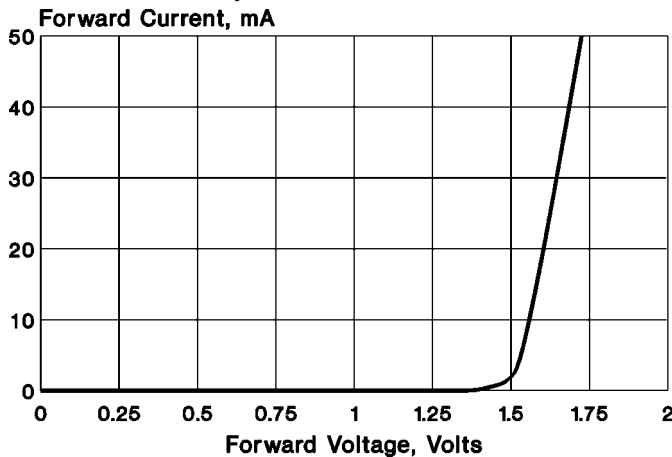
Output Resistance vs. Input Current  
VTL5C4/2



Response Time  
VTL5C4/2



Input Characteristics



Notes:

1. 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.
2. Output resistance vs input current transfer curves are given for the following light adapt conditions:
  - (1) 25°C — 24 hours @ no input
  - (2) 25°C — 24 hours @ 40 mA input
  - (3) +50°C — 24 hours @ 40 mA input
  - (4) -20°C — 24 hours @ 40 mA input
3. Response time characteristics are based upon test following adapt condition (2) above.