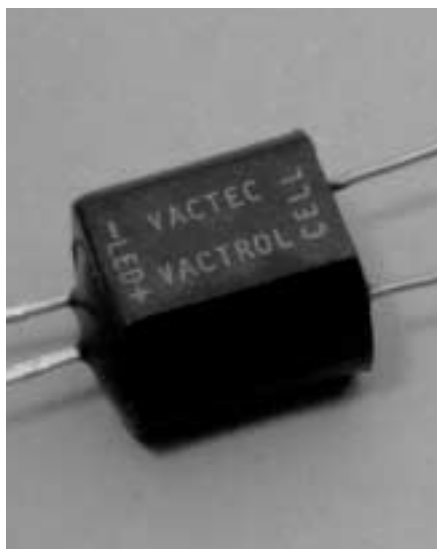
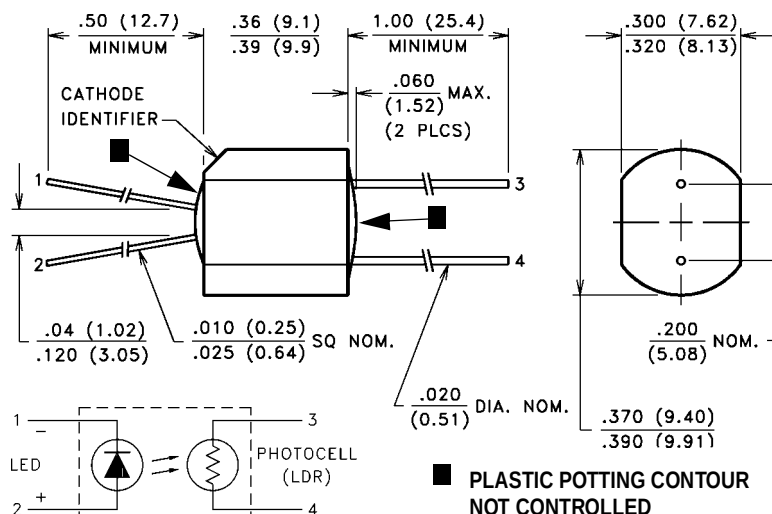




PACKAGE DIMENSIONS INCH (MM)



DESCRIPTION

VTL5C3 has a steep slope, good dynamic range, a very low temperature coefficient of resistance, and a small light history memory. VTL5C4 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:	250V (VTL5C3), 50V (VTL5C4)
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			

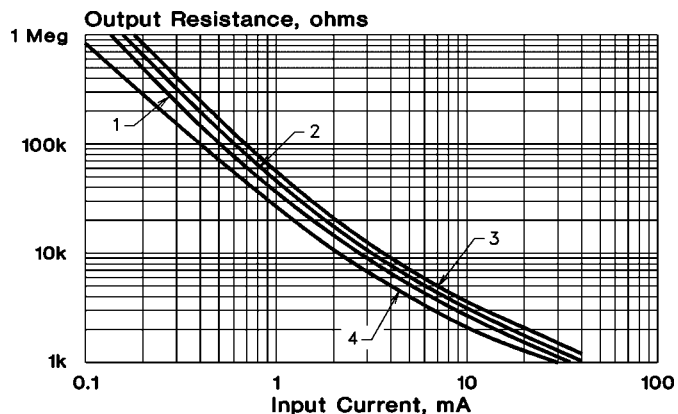
ELECTRO-OPTICAL CHARACTERISTICS @ 25°C

Part Number	Material Type	ON Resistance 2		OFF 3 Resistance @ 10 sec. (Min.)	Slope (Typ.) R @ 0.5 mA R @ 5 mA	Dynamic Range (Typ.) 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 100 kΩ (Max.)
VTL5C3	3	1 mA 10 mA 40 mA	30 kΩ 5 Ω 1.5 Ω	10 MΩ	20	75 db	2.5 ms	35 ms
VTL5C4	4	1 mA 10 mA 40 mA	1.2 kΩ 125 Ω 75 Ω	400 MΩ	18.7	72 db	6.0 ms	1.5 sec

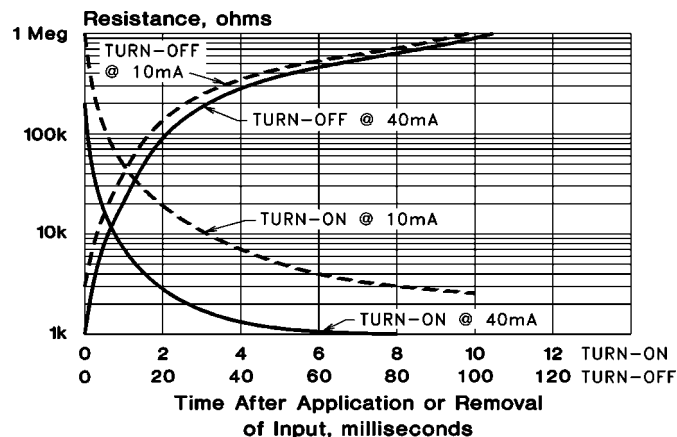
Refer to Specification Notes, page 41.

Typical Performance Curves

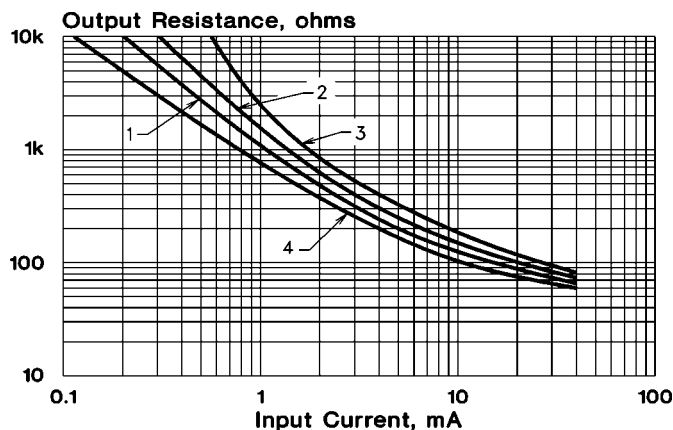
Output Resistance vs. Input Current
VTL5C3



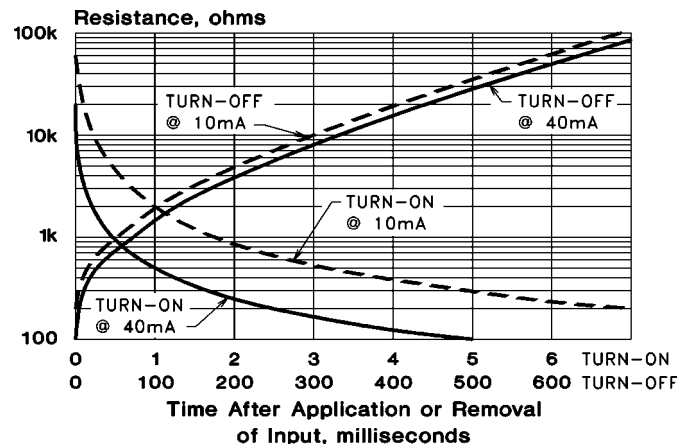
Response Time
VTL5C3



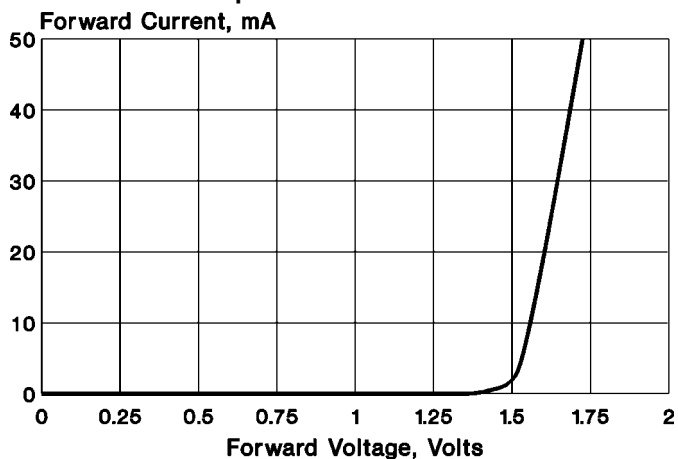
Output Resistance vs. Input Current
VTL5C4



Response Time
VTL5C4



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.

PerkinElmer (formerly EG&G Vactec) part VTL5C4 is the preferred unit for remote antenna termination.

As of 21 OCT 2004 it is supplied by Newark InOne Electronics as stock # 43F888 and by Allied Electronics as stock # 980-0716.

Silonex NSL-32SR2, Allied stock # 699-3010, may also be used.

Features

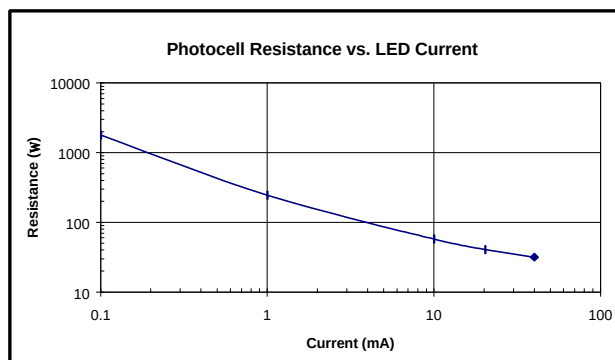
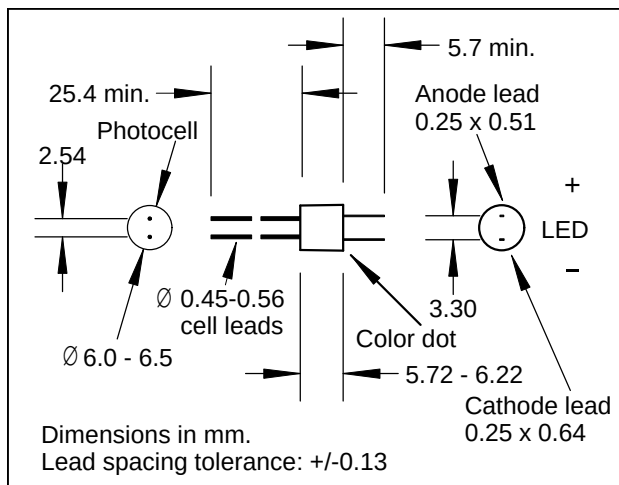
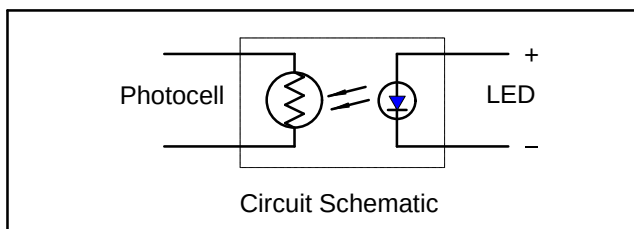
- Compact, moisture resistant package
- Lowest "on" resistance
- Very low LED current
- Passive resistance output
- Low distortion

Description

This optocoupler consists of an LED input optically coupled to a photocell. The photocell resistance is high when the LED current is "off" and low resistance when the LED current is "on".

Absolute Maximum Ratings

Storage Temperature	-40 to +75°C
Operating Temperature	-40 to +75°C
Soldering Temperature (1)	260°C
Isolation Voltage (peak)	2000V



Electrical Characteristics (T_A=25°C)

Symbol	Parameter	Min.	Typ.	Max.	Units	Test Conditions
LED						
I _F	Forward Current			25	mA	
V _F	Forward Voltage			2.5	V	I _F = 20 mA
I _R	Reverse Current			10	μA	V _R = 4V
Cell						
V _C	Maximum Cell Voltage			60	V	(Peak AC or DC)
P _D	Power Dissipation			50	mW	(2)
Coupled						
R _{ON}	On Resistance			40	Ω	I _F = 20 mA
			140		Ω	I _F = 1 mA
R _{OFF}	Off Resistance	1	5		MΩ	10 sec after I _F = 0, 5Vdc on cell.
T _R	Rise Time		5		msec	Time to 63% of final conductance @ I _F = 20mA
T _F	Decay Time		80		msec	Time to 100KΩ after removal of I _F = 20mA
	Cell Temp Coefficient		0.7		%/°C	I _F > 5 mA

Specifications subject to change without notice
Note: (1) >2 mm from case for <5 sec.
(2) Derate linearly to 0 at 75°C

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