Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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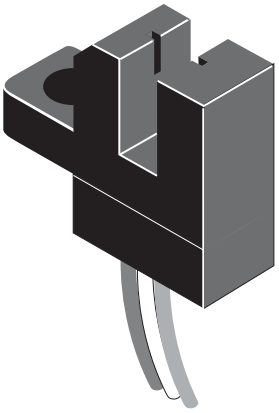
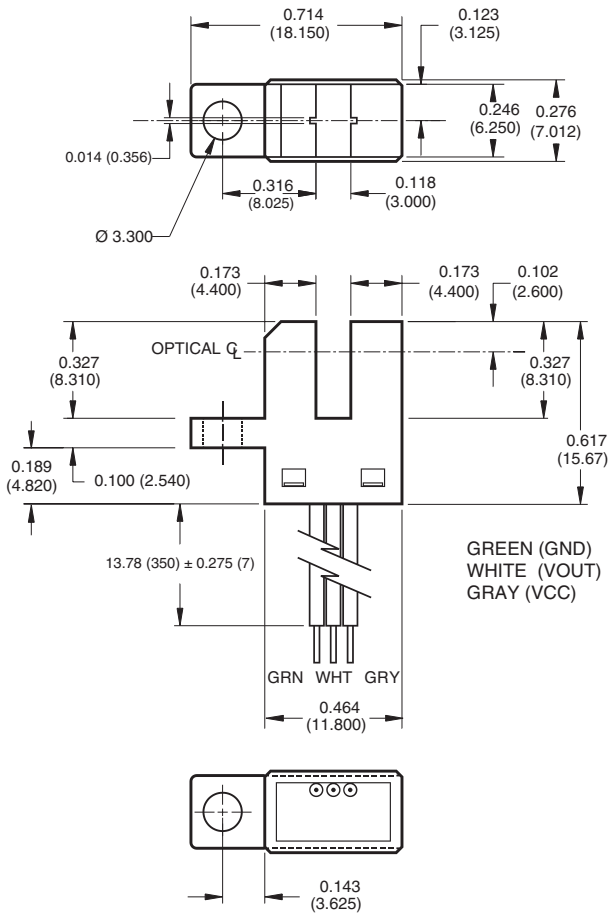
FAIRCHILD
SEMICONDUCTOR®

OPTOLOGIC® OPTICAL INTERRUPTER SWITCH

QVE00112



PACKAGE DIMENSIONS



NOTES:
1. Dimensions for all drawings are in inches (millimeters).
2. Tolerance of ± .010 (.25) on all non-nominal dimensions unless otherwise specified.
3. Wire gauge: 24 AWG, 7 strand, pre-tinned copper.

FEATURES

- No contact switching
- Mounting tab
- Wire leads for remote connection
- 3 mm slot
- Output configuration: Inverter open-collector
- TTL/CMOS compatible output
- Aperture width: .014"

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Rating	Units
Operating Temperature	T_{OPR}	-40 to +85	°C
Storage Temperature	T_{STG}	-40 to +85	°C
Soldering Temperature (Iron)[2,3,4]	T_{SOL-I}	240 for 5 sec	°C
EMITTER			
Continuous Forward Current	I_F	50	mA
Reverse Voltage	V_R	5	V
Power Dissipation[1]	P_D	100	mW
SENSOR			
Output Current	I_O	50	mA
Supply Voltage	V_{CC}	16	V
Output Voltage	V_D	30	V
Power Dissipation[2]	P_D	150	mW

NOTES (Applies to Max Ratings and Characteristics Tables.)
1. Derate power dissipation linearly 1.67 mW/°C above 25°C.
2. Derate power dissipation linearly 2.50 mW/°C above 25°C.
3. RMA flux is recommended.
4. Methanol or isopropyl alcohols are recommended as cleaning agents.

ELECTRICAL/OPTICAL CHARACTERISTICS (T_A =25°C)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Operating Supply Voltage		V_{CC}	4.5	—	5.5	V
INPUT DIODE						
Forward Voltage	I_F = 20 mA	V_F	—	—	1.7	V
Reverse Leakage Current	V_R = 5 V	I_R	—	—	10	µA
COUPLED						
Operating Supply Current	V_{CC} = 16 V	I_{CC}	—	—	12	mA
Low Level Output Voltage	V_{CC} = 5 V, R_L = 360 Ω	V_{OL}	—		0.4	V
High Level Output Current	V_{CC} = 5 V, V_{OH} = 30 V (Light Path Blocked)	I_{OH}	—	—	100	µA
Hysteresis Ratio			—	1.2	—	
Propagation Delay	V_{CC} = 5 V, R_L = 360 Ω	t_{PLH}, t_{PHL}	—	5	—	µs
Output Rise and Fall Time	V_{CC} = 5 V, R_L = 360 Ω	t_r, t_f	—	70	—	ns

OPTOLOGIC® OPTICAL INTERRUPTER SWITCH

QVE00112

Fig. 1 Output Voltage Vs. Shield Distance (Vertical)

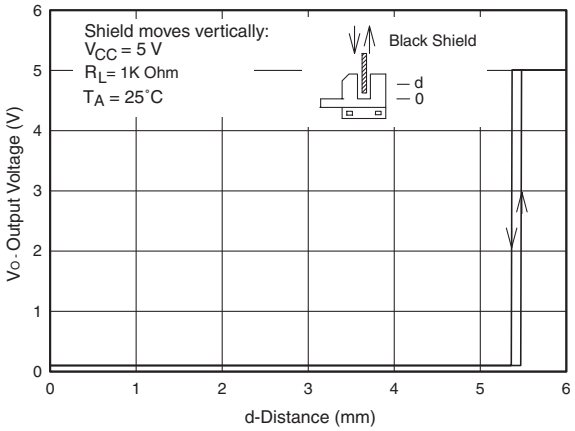


Fig. 2 Output Voltage vs. Shield Distance (Horizontal)

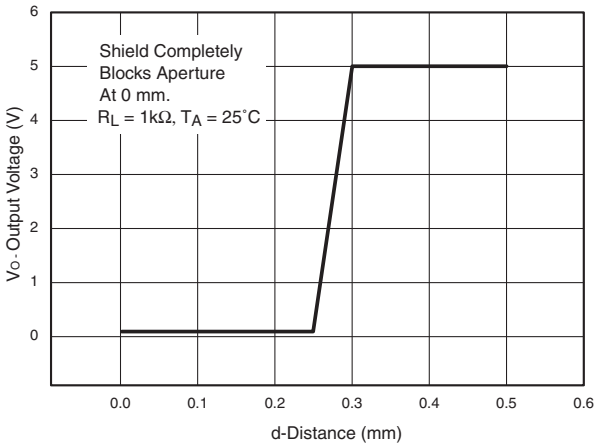


Fig. 3 Supply Current vs. Supply Voltage

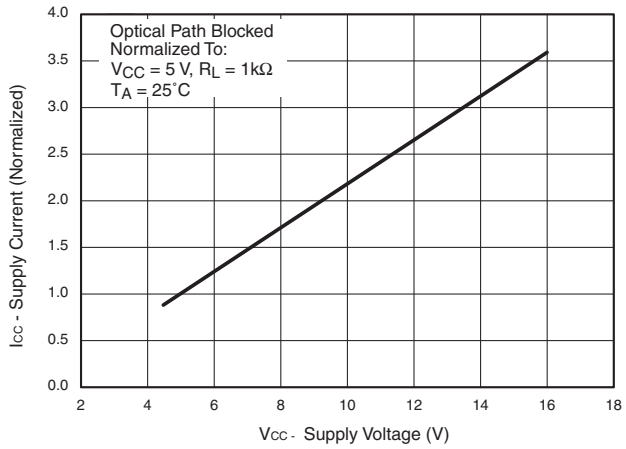


Fig. 4 Supply Current vs. Supply Voltage

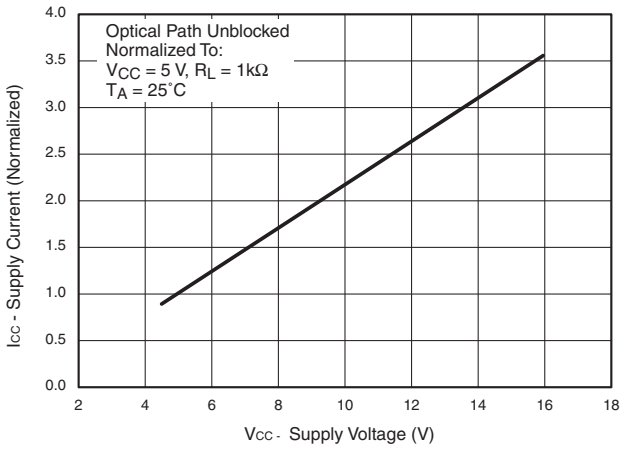


Fig. 5 Low Level Output Voltage vs. Supply Voltage

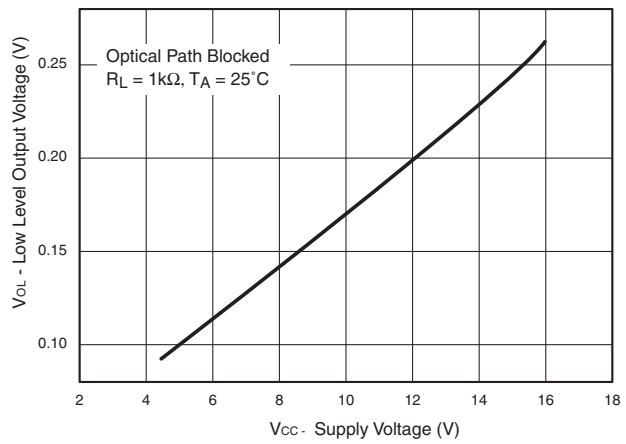


Fig. 6 Low Level Output Voltage vs. Load Resistance

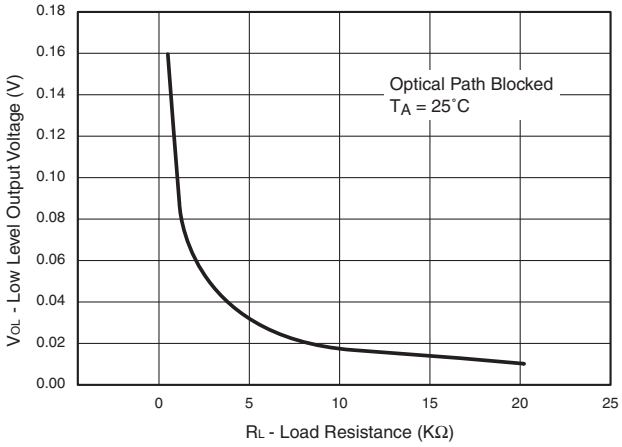


Fig. 7 Schematic

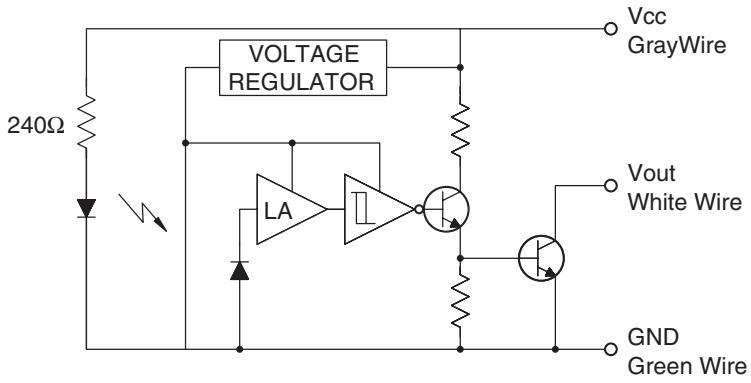
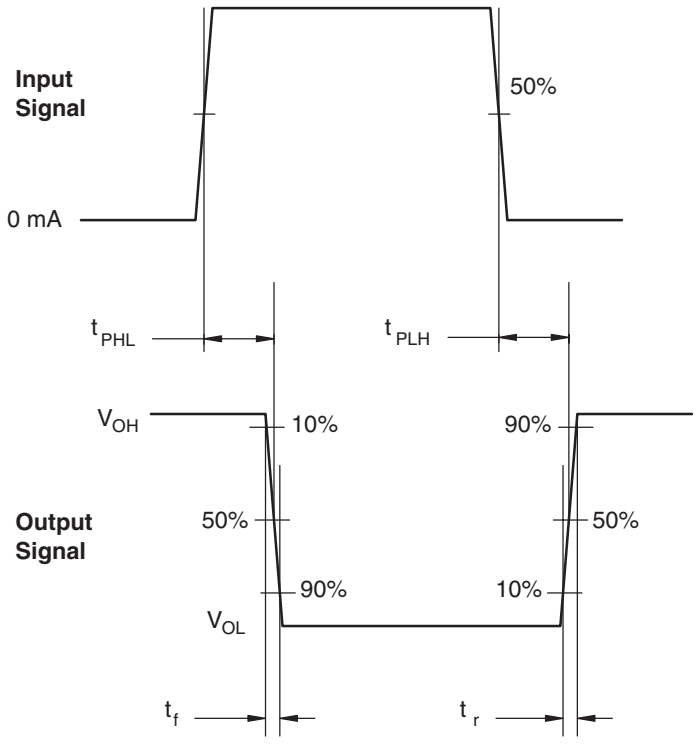


Fig. 8 Switching Test Curve for Inverters



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