

**Electrical Characteristics** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
<b>Input Diode</b>						
$V_F$	Forward Voltage	-	1.3	1.8	V	$I_F = 20\text{ mA}$
$I_R$	Reverse Current	-	-	100	$\mu\text{A}$	$V_R = 2\text{ V}, T_A = 25^\circ\text{C}$
<b>Output Photologic® Sensor</b>						
$V_{CC}$	Operating DC Supply Voltage	4.5	-	16	V	-
$I_{CCL}$	Low Level Supply Current: Buffered with 10k pull-up <sup>(1)</sup> Buffered Open-Collector Output <sup>(1)</sup>	-	-	7	mA	$V_{CC} = 16\text{ V}, I_F = 0\text{ mA}, \text{No Output Load}$
	Inverted with 10k pull-up: Inverted Open-Collector Output	-	-	7	mA	$V_{CC} = 16\text{ V}, I_F = 10\text{ mA}, \text{No Output Load}$
$I_{CCH}$	High Level Supply Current: Buffered with 10k pull-up Buffered Open-Collector Output	-	-	6	mA	$V_{CC} = 16\text{ V}, I_F = 10\text{ mA}, \text{No Output Load}$
	Inverted with 10k pull-up: Inverted Open-Collector Output <sup>(1)</sup>	-	-	6	mA	$V_{CC} = 16\text{ V}, I_F = 0\text{ mA}, \text{No Output Load}$
$V_{OL}$	Low Level Output Voltage: Buffered with 10k pull-up Buffered Open-Collector Output	-	-	0.4	V	$V_{CC} = 4.5\text{ V}, I_{OL} = 16\text{ mA}, I_F = 0\text{ mA}$
	Inverted with 10k pull-up: Inverted Open-Collector Output	-	-	0.4	V	$V_{CC} = 4.5\text{ V}, I_{OL} = 16\text{ mA}, I_F = 10\text{ mA}$
$V_{OH}$	High Level Output Voltage: Buffered with 10k pull-up	$V_{CC} - 2.0$	-	-	V	$V_{CC} = 4.5\text{ V to } 16\text{ V}, I_F = 10\text{ mA}, I_{OH} = 100\text{ }\mu\text{A}$
	Inverted with 10k pull-up:	$V_{CC} - 2.0$	-	-	V	$V_{CC} = 4.5\text{ V to } 16\text{ V}, I_F = 0\text{ mA},$
$I_{OH}$	High Level Output Current: Buffered with 10k pull-up Buffered Open-Collector Output	-	1.0	10	$\mu\text{A}$	$V_{CC} = 4.5\text{ V}, I_F = 10\text{ mA}, V_{OH} = 30\text{ V}$
	Inverted with 10k pull-up: Inverted Open-Collector Output <sup>(1)</sup>	-	1.0	10	$\mu\text{A}$	$V_{CC} = 4.5\text{ V}, I_F = 0\text{ mA}, V_{OH} = 30\text{ V}$

**General Note**

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

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## Electrical Characteristics (T<sub>A</sub> = 25° C unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
<b>Output Photologic® Sensor</b>						
I <sub>F(+)</sub>	LED Positive-Going Threshold Current Buffered with 10k pull-up Inverted with 10k pull-up	-	5	10	mA	V <sub>CC</sub> = 5 V, No Output Load
	Buffered Open-Collector Output Inverted Open-Collector Output <sup>(1)</sup>	-	5	10	mA	V <sub>CC</sub> = 4.5 V, I <sub>OL</sub> = 16 mA
I <sub>F(+)</sub> /I <sub>F(-)</sub>	Hysteresis	-	1.5	-	-	V <sub>CC</sub> = 5 V
t <sub>r</sub> , t <sub>f</sub>	Rise Time, Fall Time	-	50	-	ns	V <sub>CC</sub> = 5 V, I <sub>F</sub> = 0 or 10 mA,
t <sub>PLH</sub> , t <sub>PHL</sub>	Propagation Delay	-	3	-	μs	R <sub>L</sub> = 300 Ω to 5 V, C <sub>L</sub> = 50 pF

**Notes:**

- (1) Normal application would be with light source blocked, simulated by I<sub>F</sub> = 0 mA.
- (2) All parameters tested using pulse technique.

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