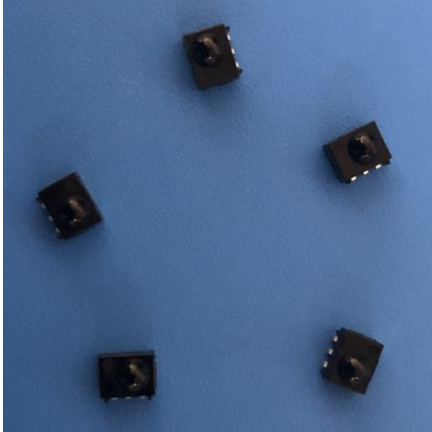


Light Detectors for Infrared Communication

OSC1117ML



Description

The OSC1117ML contain a monolithic integrated circuits Which incorporating a photodiode, linear preamplifier, A voltage regulator, and a Schmitt trigger on a single chip.

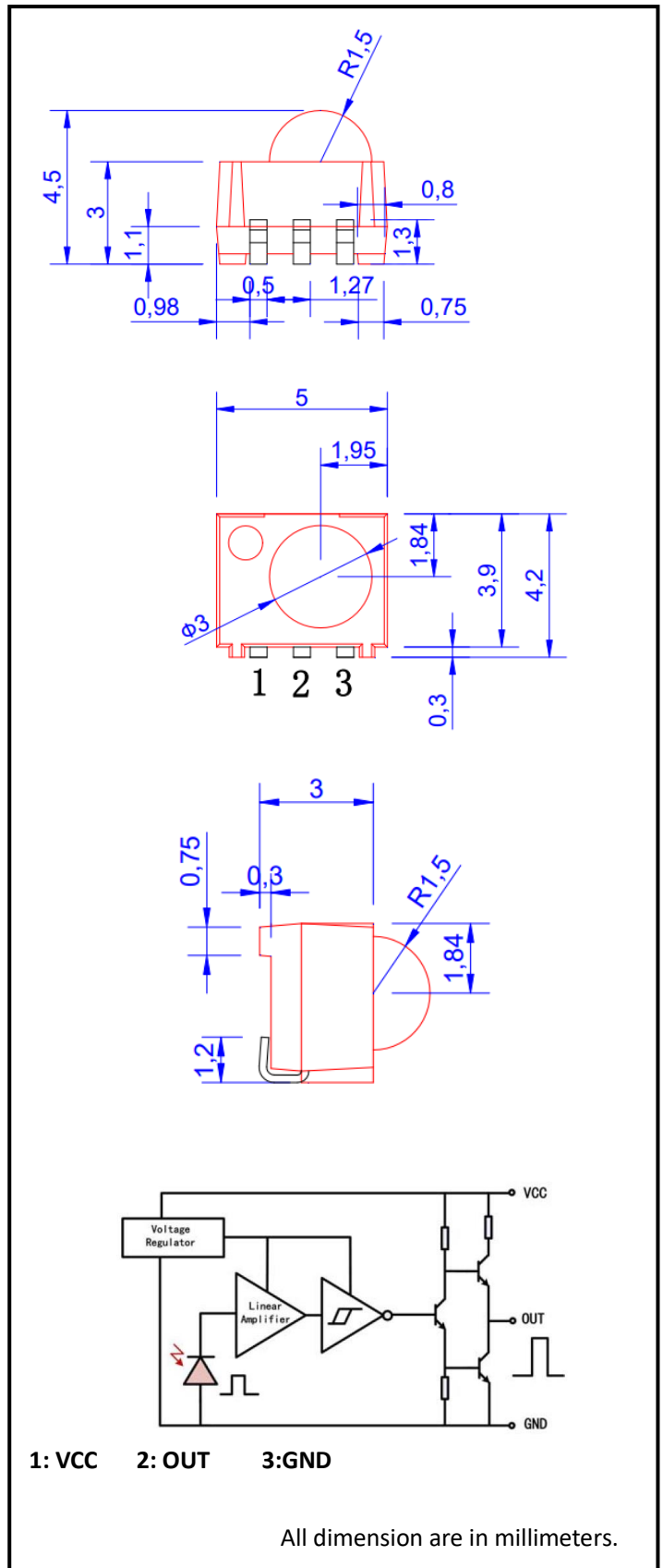
The device features TTL/LSTTL compatible logic level Output which can drive up to 10 TTL loads over supply Voltages ranging from 4.5 to 18V. The Schmitt trigger's Hysteresis characteristics provide high immunity to noise On input and Vcc.

Features

- * Direct TTL/LSTTL interface
- * Data rate to 200kBaud
- * Low cost
- * Visible light cut

Applications

- *Automatic door, optical switch
- *Light curtain



Absolute Maximum Ratings (Ta=25°C)

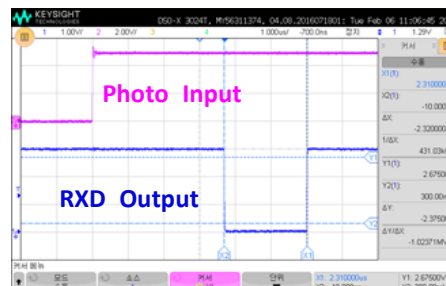
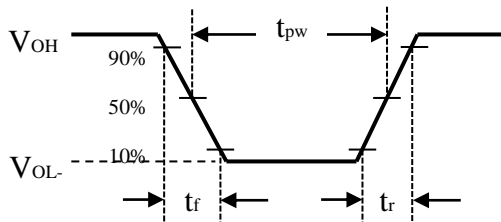
Parameter	Symbol	Min.	Typ.	Max.	Unit
Power Supply Voltage*1	Vcc	+4.50		+18.0	V
Continuous Power Dissipation*2				250	mW
Operating Temperature	Topr	-25		+85	°C
Storage Temperature	Tstg	-40		+100	°C
Sourcing Current				10	mA
Sinking Current				50	mA

*1 Peak to peak Vcc ripple necessary to cause false triggering of output <=1V (f= DC to 50MHz).

*2 Derate linearly 2.5mW/°C above 25°C

Typical Characteristics:

RXD output waveform



Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission.

Specifications are subject change without notice

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Electrical and Optical characteristics (Ta=25°C)

Parameter	Symbol	Condition	Index			Unit
			Min.	Typ.	Max.	
Operation Supply Voltage	V _{CC}	-	4.50		18.0	V
Dissipation Current	I _{CC}	Ee=0 mw/cm ²	-	6	-	mA
High Level Output Voltage	V _{OH}	I _{OH} =1mA, Ee=35uW	4.0	-		V
Low Level Output Voltage	V _{OL}	I _{OL} =16mA, Ee=0	0	-	0.4	V
Rise/Fall time	Tr/Tf	f=10KHz, Ee=0 or 35uW, DC=50%, RL=10TTL loads	-		100	nS
Positive-Going Threshold Irradiance	EeT(+)	-		4.2		uW
Negative-Going Threshold Irradiance	EeT(-)			3.2		uW
Propagation Delay, Low-High, High-Low	t _{PLH} , t _{PHL}	f=10KHz, Ee=0 or 35uW, DC=50%, RL=10TTL loads			5	us
Spectral Response Sensitivity	λ	-	700	-	1100	nm
Peak Wavelength	λ _p	-		850		nm
Half Angle	∠θ			±45		deg

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