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DATA SHEET

PART NO. : PL-IRM2121-A538

REV :     A / 0    

CUSTOMER'S APPROVAL : \_\_\_\_\_

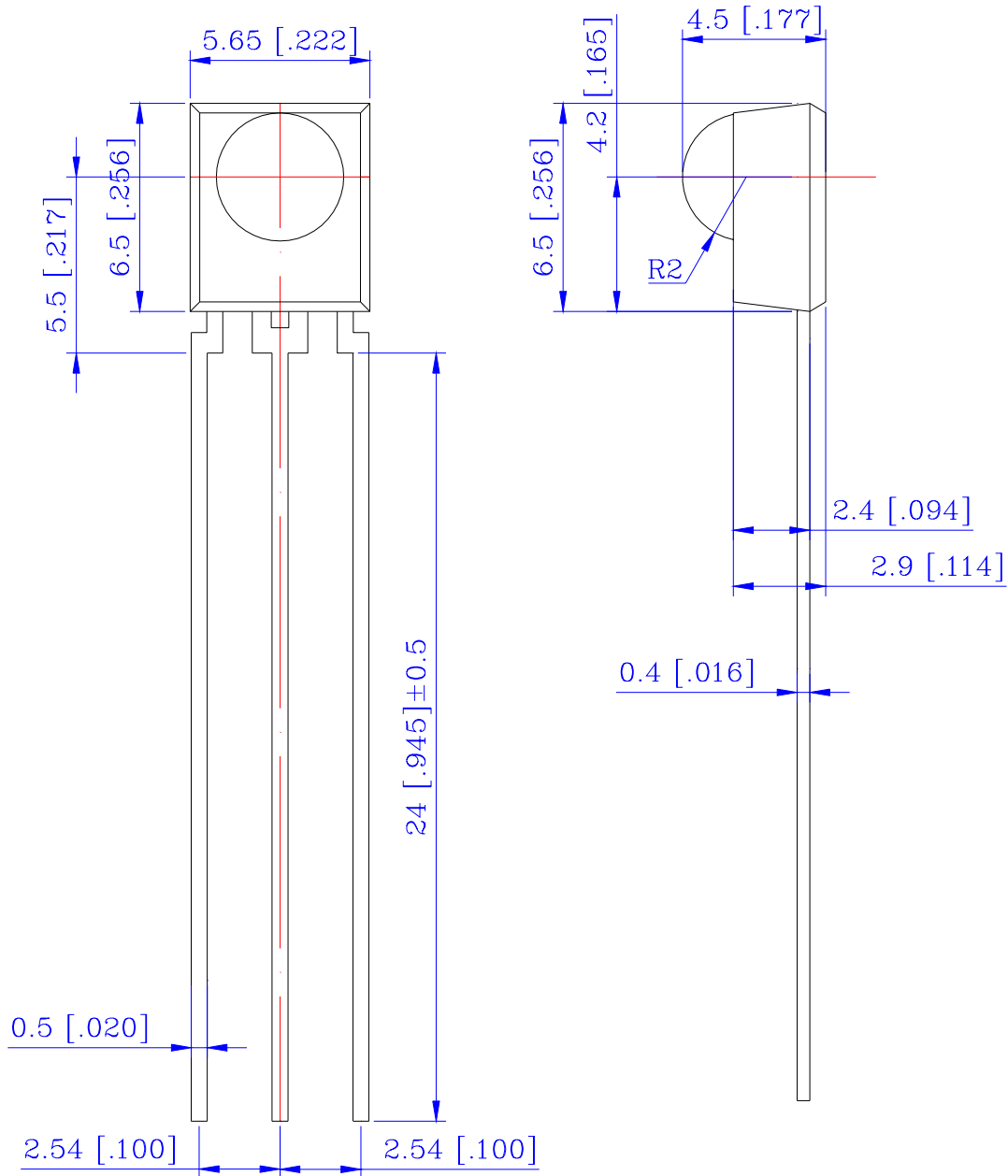
DCC : \_\_\_\_\_

DRAWING NO. : DS-27-04-0057

DATE : 2004-04-16

Page : 1

● PACKAGE DIMENSIONS



Vout GND Vcc

NOTES :

- 1. All dimensions are in millimeters.
- 2. Tolerance is  $\pm 0.25(0.010)$  unless otherwise specified

● FEATURES

- \* ONE MOLD SMALL PACKAGE
- \* 5 VOLT SUPPLY VOLTAGE, LOW POWER CONSUMPTION
- \* SHIELDED AGAINST ELECTRICAL FIELD DISTURBANCE

● ABSOLUTE MAXIMUM RATING : ( Ta = 25°C )

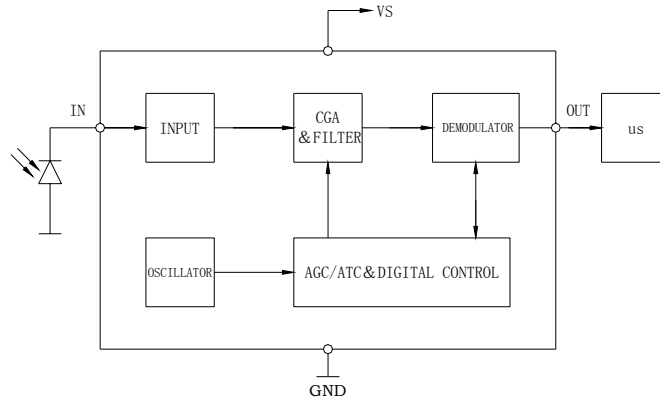
SYMBOL	PARAMETER	ULTRA CONDITION	UNIT
Vcc	Supply Voltage	5.5	V
Tstg	Storage Temperature Range	-25to 85	°C
Topr	Operating Temperature Range	-25to 85	°C
Tsol	Soldering Temperature	255(MAX 5sec)	°C
Lead soldering temperature { 1.6mm (0.063inch) from body } 250±5°C for 3 seconds.			

● ELECTRO-OPTICAL CHARACTERISTICS : ( Ta = 25°C )

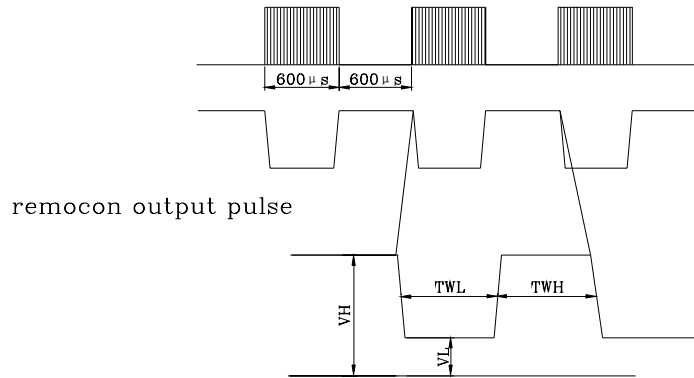
SYMBOL	PARAMETER	CONDITION	MIN.	TYP.	MAX.	UNIT
Vcc	Supply Voltage		4.5	5		V
Icc	Current Consumption	Input signal=0			2.5	mA
λP	Peak Emission Wavelength			940		nm
fo	B.P.F Center Frequency			38		KHz
L	Arrival Distance	L-514EIR1C	0°	35		m
			±30°	9		m
Voh	H Level Output Voltage	30cm over the axis	4.5			V
Vol	L Level Output Voltage		0.1	0.5	V	
Twh	H Level Output Pulse Width	Burst wave=600 μ s	500	600	700	μ s
Twl	L Level Output Pulse Width	Period=1.2ms	500	600	700	μ s
Output Form		Active low output				

Arrival light source: Detecting surface illumination shall be irradiate 400Lux under ordinary white fluorescence lamp without high frequency lightening.

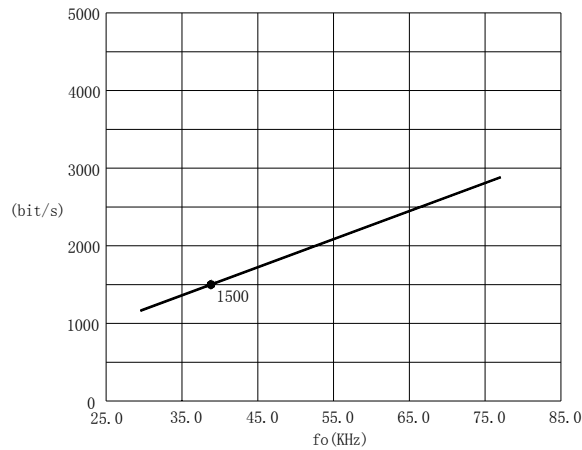
● BLOCK DIAGRAM



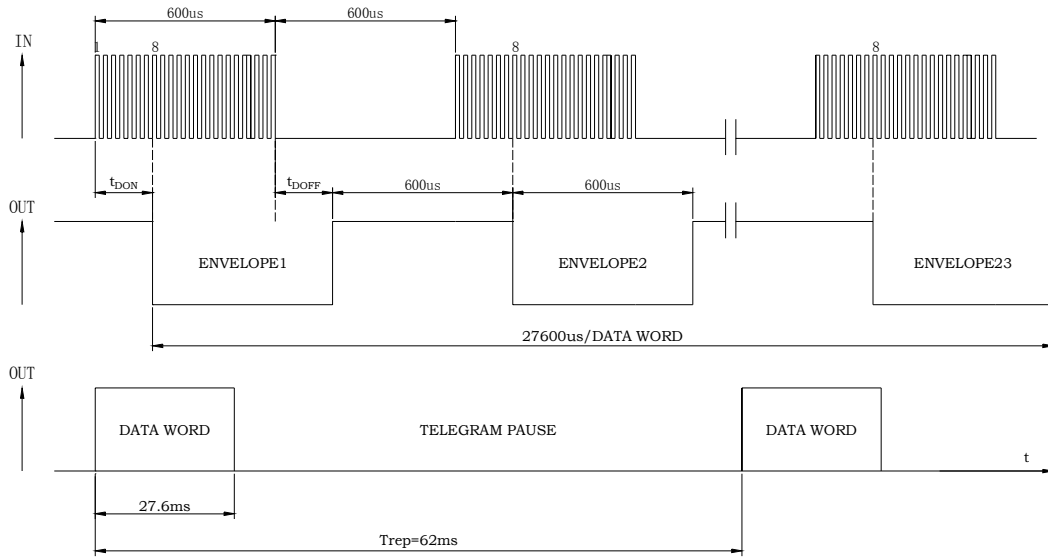
● TRANSMIT SIGNAL (CARRIER FREQUENCY= $f_0$ )



● DATA TRANSMISSION RATE,  $V_s=5V$



● ILLUSTRATION OF USED TERMS



● TYPICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

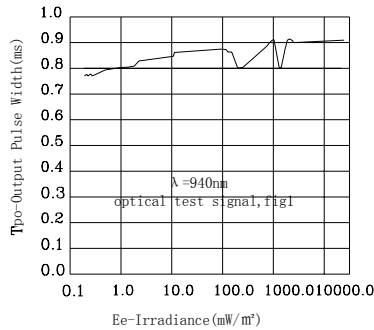


Figure1.Output Pulse Diagram

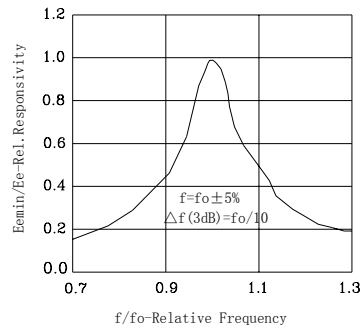


Figure3.Frequency Dependence of Responsivity

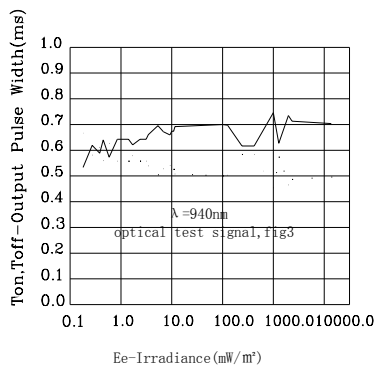


Figure2.Output Pulse Diagram

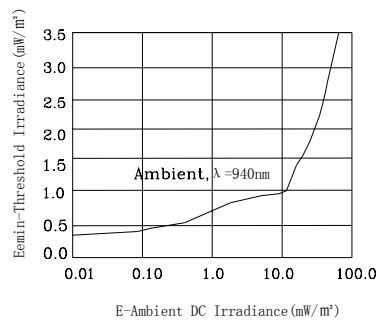


Figure4.Sensitivity In Bright Ambient

● SEMICONDUCTOR

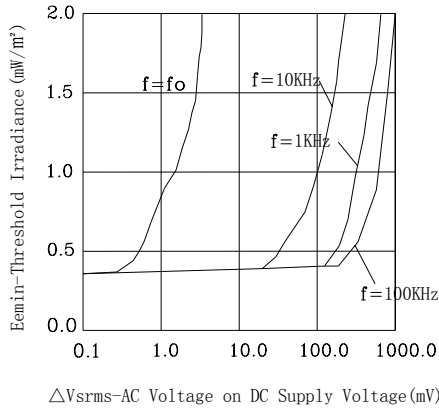


Figure5.Sensitiy vs.Supply Voltage Distances

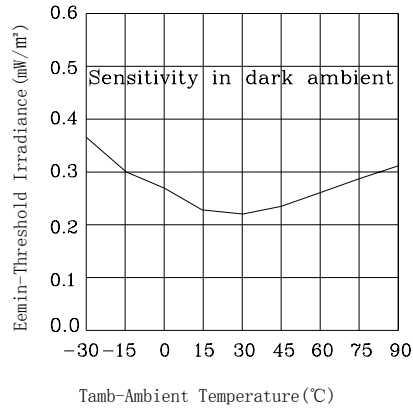


Figure8.Sensitivity vs.Ambient Temperature

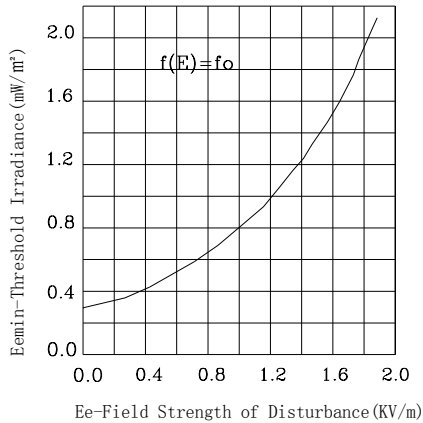


Figure6.Sensitivity vs.Electric Disturbances

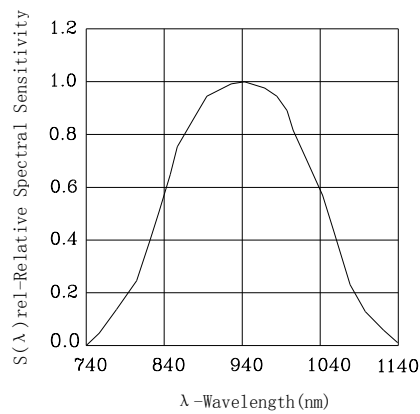


Figure9.Relative Spectral Sensitivity vs.wavelength

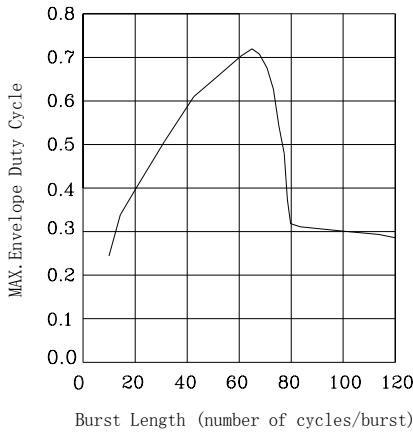


Figure7.Max.Envelope Duty Cycle vs.Burstlength

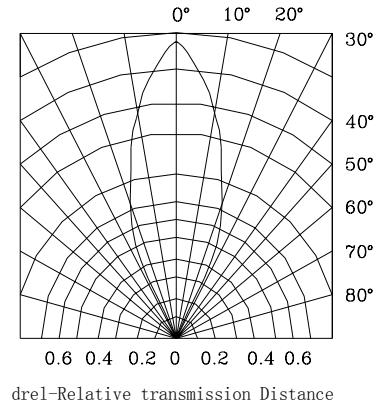


Figure10.Directivity

● OPERATION NOTES(STANDARD CONDITION)

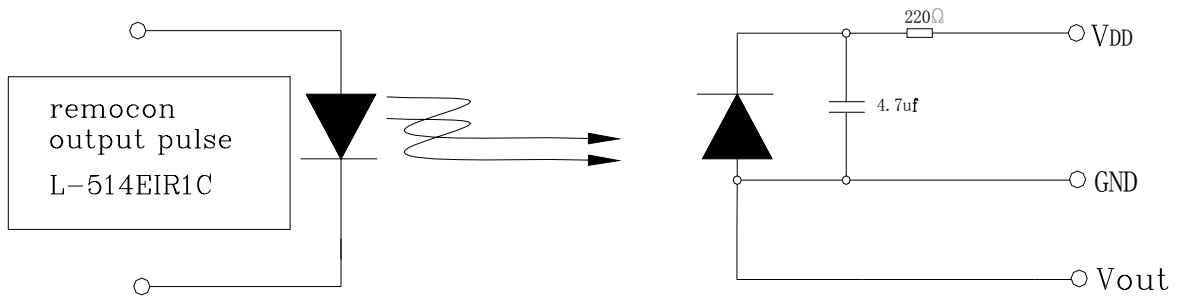
IR CODE	IR RECEIVER PL-IRM2121-A538		
	BEST APPLICATION	SUITABLE	NOT RECOMMENDED
GRUNDIG CODE		@	
NEC CODE		@	
RC5 CODE		@	
RC6 CODE	@		
RCMM CODE	@		
RCS-80 CODE			@
R-2000 CODE		@	
RCA CODE		@	
SHARP CODE		@	
SONY 12BIT CODE		@	
SONY 15BIT CODE	@		
ZENITH CODE		@	
HIGH DATA RATE CODE			@
DISTURBANCE SUPPRESSION	@		

NOTE: @:BEST FOR APPLICATION

● OVERVIEW OF THE DUSTURBANCE SUPPRESSION BEHAVIOR

DISTURBANCE LAMP	IR RECEIVER PL-IRM2121-A538
FROM MOST USED FLUORESCENT LAMPS (WITH SWITCHED SUPPLY )	BEST SUPPRESSION
FROM MOST USED FLUORESCENT LAMPS (WITH DIRECT LINE SUPPLY )	BEST SUPPRESSION
FROM MOST USED FLUORESCENT LAMPS (WITH STRONG BALLAST)	POSSIBILITY OF DISTURBANCE PULSES

- \* ALL CHARACTERISTICS OF THE RECEIVER IN THIS SPECIFICATION ARE SPECIFIED BY SUPPLYING BURST WAVE FORM WITH STANDARD TRANSMITTER (FIG.11)
- \* IF IN CASE OF OTHER BURST WAVE FORM WILL BE USED,PLEASE CHECK THESE SPEC. CAREFULLY UNDER THE EVALUATION.
- \* WHEN THE RECEIVER WILL BE USED AS THE WIRE-LESS REMOTE CONTROLLER ,PLEASE USE THE SIGNAL METHOD THE SIGNAL FORMAT WHICH REFER TO "MEASURES TO PREVENT MISS-FUNCTIONING OF IR REMOTE-CONTROLLED ELECTRIC HOME APPLIANCES".



Test Condition

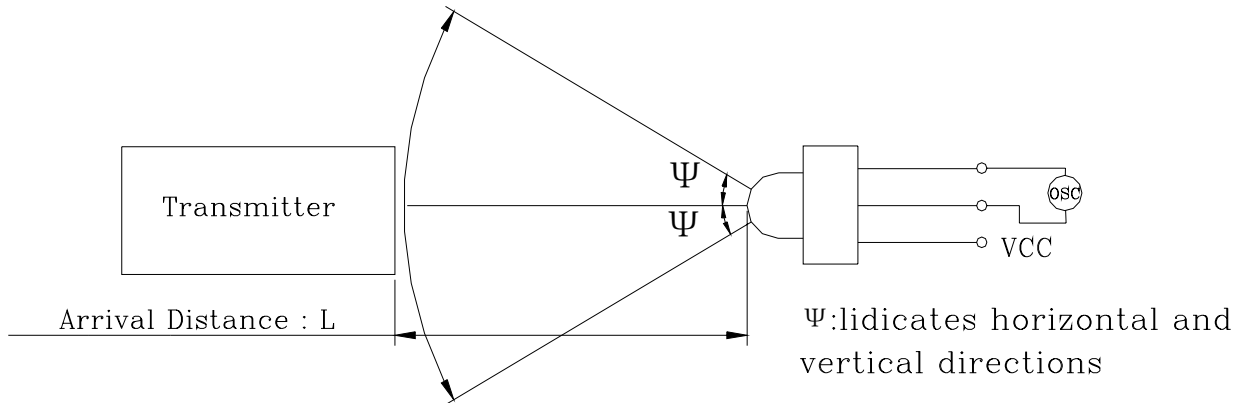


FIG.11 MEASUREMENT OF STANDARD TRANSMITTER PROOFREADING