



Reflective Blood Sensor Array

with Body Temp & Pressure sensing

DCM11

FEATURES

- Integrated Quaternary Emitters and a Photo Detector
- Red, IR1, IR2, IR3 LED Lightings
- Body Temp Checking
- Chip on Board Package

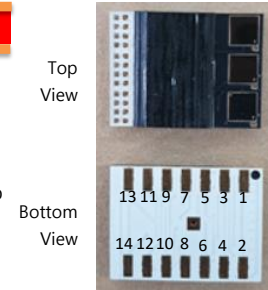
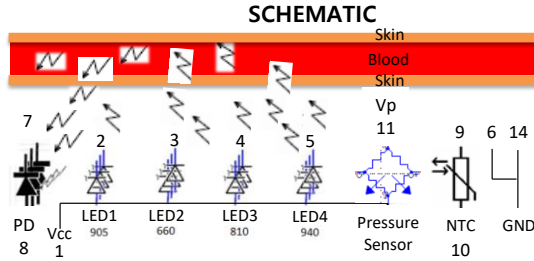
APPLICATIONS

- Reflective Oximetry
- Wearable Optical Device
- Blood Pressure Device

PACKAGE DIMENSION (mm)

w x h x t = 16.6 x 12.6 x 1.5

PAD = 1.0 x 3.0



ABSOLUTE MAX. RATINGS (Ta=25°C unless otherwise noted)

SYMBOL	PARAMETER	MAX. RATED VALUE	UNITS
PD	Power Dissipation	120	mW
IF	Continuous Forward Current	50	mA
IFP	Peak Forward Current	100	mA
VR	Reverse Voltage	5	V
T stg	Storage Temp	-20 ~ +85	°C
T opr	Operating Temp	-20 ~ +80	°C
T sd	Soldering Temperature*1	240	°C

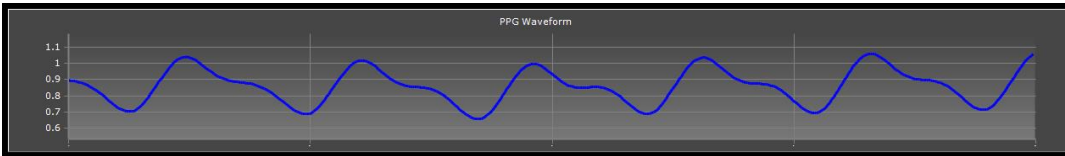
*Soldering time : t < 3s, **Moisture Sensivity Level 3

***Prebake 150°C 2HRs if Reflow Soldering

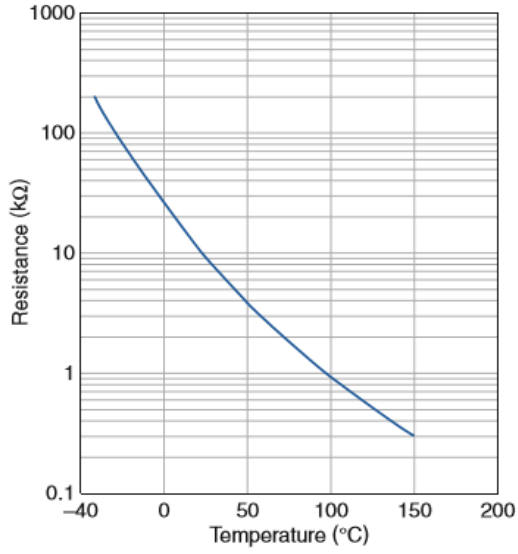
CHARACTERISTICS (Ta=25°C unless otherwise noted)

SYMBOL	CHARACTERISCTIC	COMPONENTS	TEST CONDITION	MIN	TYP	MAX	UNITS	
VF	Forward Voltage	LED2	IF=20mA		1.9	2.2	V	
		LED4		0.5	2.5			
		LED3		1.4	1.6			
		LED1		1.3	1.5			
		PD		IF=10mA	0.5	1.3		
IR	Reverse Breakdown Current	LED1,2,3,4	VR=5V			10	uA	
P O	Output Power	LED2	IF=20mA		2		mW	
		LED4		2				
		LED3		3.8				
		LED1		2				
		NTC		100				
λ PEAK	Peak Wavelength	LED2	IF=20mA		660		nm	
		LED4		940				
		LED3		810				
		LED1		905				
		PD		940				
Δλ	Half Wave Width	LED2	IF=20mA		30		nm	
		LED4		60				
		LED3		50				
		LED1		30				
V BR	Reverse Breakdown Voltage	PD	IR=100uA	35			V	
I D	Reverse Dark Current		V R=5V			10	nA	
I L	Light Current		1mW@940nm		45		uA	
S	Spectral Response Range			400		1050	nm	
CJ	Junction Capacitance			VR=3V, f=1MHz		44		pF

PPG(Photo Plethysmogram) Characteristic



RT Curve : 10K Ω @25 $^{\circ}$ C



Temperature($^{\circ}$ C)	Resistance(K Ω)
20	12.09
25	10
30	8.31
35	6.94
40	5.826

Footprint Top View

