

Infrared Source

**OIR-800 Fxx**

Revision Date: 2019/03/07 (Rev.12)



**Introduction**

The OIR-800 is a high speed, high efficiency infrared light source that can provide wide spectral infrared output for gas sensing. OIR-800 has high emissivity, low thermal mass and very high thermal conductivity that can be operated up to 700°C. The OIR-800 is fabricated by OST MEMS technology.

**Features**

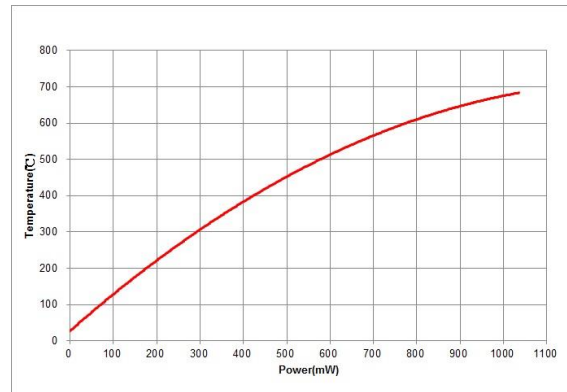
- Wide spectral output
- Fast response (<40ms)
- Long life
- High pulse rate
- High efficiency – low power
- Custom window filter

**Applications**

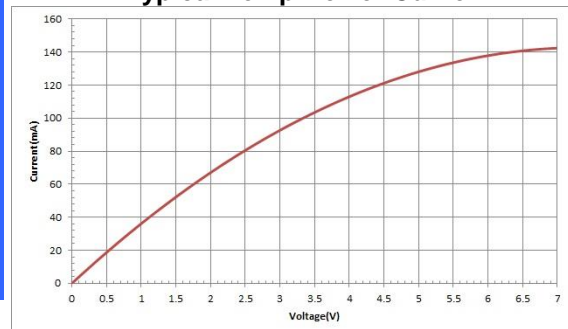
- IR absorption (NDIR) gas sensing
- Infrared spectroscopy
- Noninvasive glucose measurement
- Explosive gas detection systems
- Automobile engine control and exhaust monitoring
- Toxic emission systems
- Combustion efficiency and emission monitoring

**Specifications**

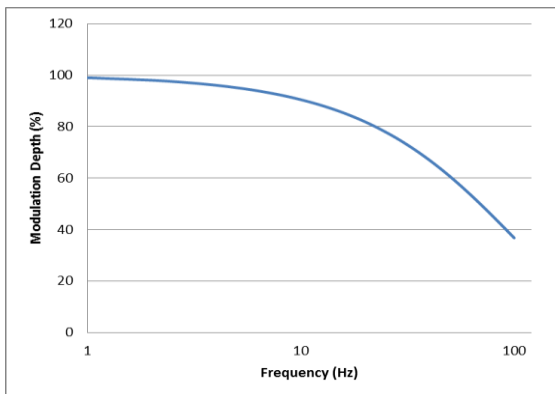
Model	OIR-800 Fxx		
Spectral output	F35 F84 FSA FSI (Please see the optical characteristic.)		
Emitter surface area	1.8x1.8mm		
Window Size	2.5mm in diameter		
Package Type	TO-5		
Parameter	Typical	Unit	Conditions
Operating temperature	-40~100	°C	
Storage temperature	-40~100	°C	
Resistance	22	ohms	
Drive voltage	6-7	Volt	For 600-700°C
Drive current	140	mA	For 6.5V
Rising time	30	ms	
Falling time	10	ms	
Working temp	700	°C	max
Life time	40,000	hrs	50ms, duty cycle 60:1, 6.5V
Power Consumption	910	mW	@6.5V, ~650°C in N <sub>2</sub>



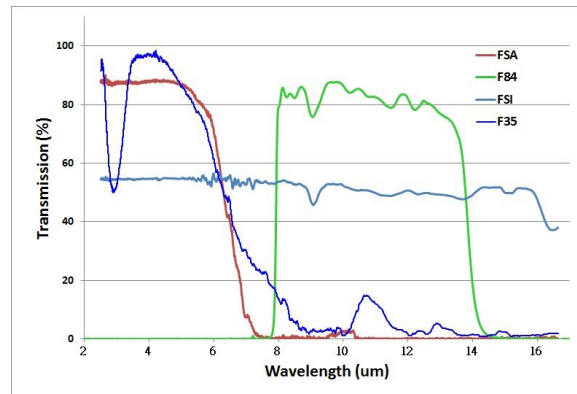
**Typical Temp-Power Curve**



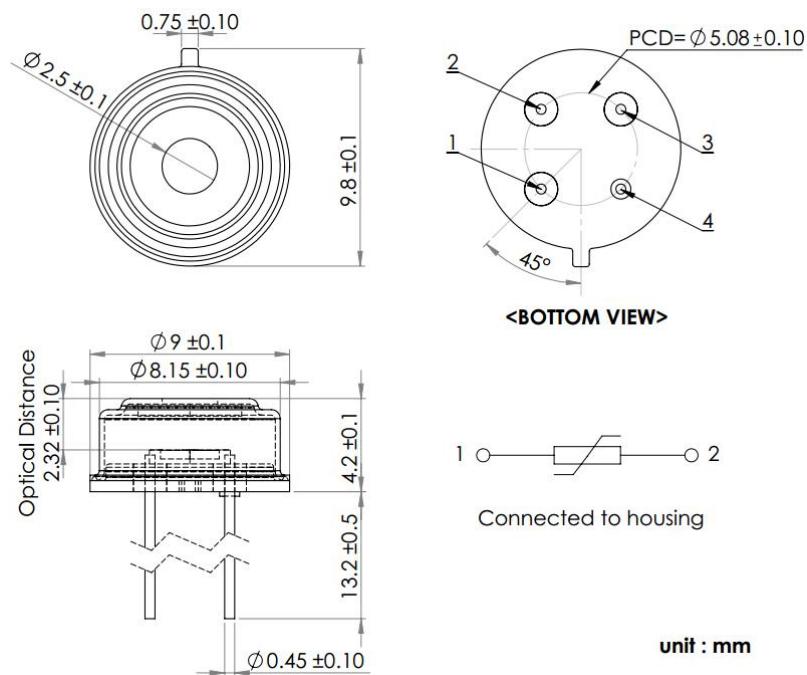
**Typical I-V Curve**



Modulation Depth vs. Frequency



Optical Characteristic



Mechanical Dimension