

## Infrared Source

### OIR-800 Fxx

Revision Date: 2020/05/05 (Rev.14)



### 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 420°C. The OIR-800 is fabricated by OST MEMS technology.

### Features

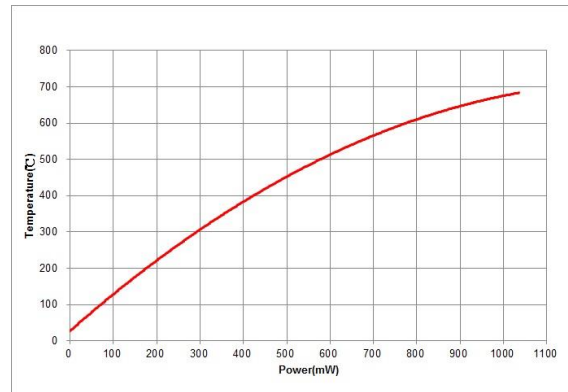
- Wide spectral output
- Fast response (<40ms)
- Long life
- High pulse rate
- High efficiency – low power
- Custom window filter

### Applications

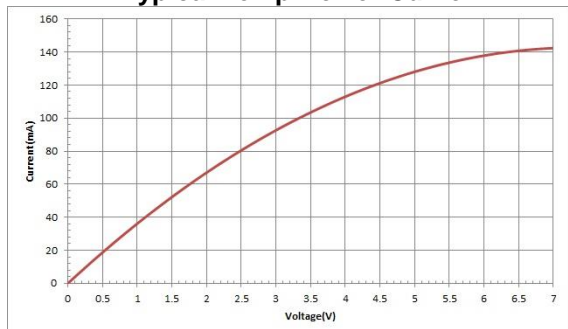
- IR absorption (NDIR) gas sensing
- Infrared spectroscopy
- Noninvasive glucose measurement
- Explosive gas detection systems
- Automobile engine control and exhaust monitoring
- Toxic emission systems
- Combustion efficiency and emission monitoring

### Specifications

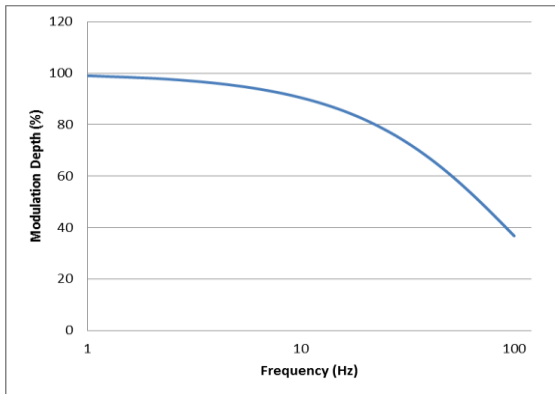
Model	OIR-800 Fxx		
Spectral output	F35 F84 FSA FSI FF3 (Please see the optical characteristic.)		
Emitter surface area	1.8x1.8mm		
Window Size	2.5mm in diameter		
Package Type	TO-5		
Parameter	Typical	Unit	Conditions
Operating temperature	-40~100	°C	
Storage temperature	-40~100	°C	
Resistance	22	ohms	typical
Drive voltage	4.5	Volt	For 420°C
Drive current	100	mA	For 4.5V
Rising time	30	ms	
Falling time	10	ms	
Working temp	420	°C	max
Life time	40,000	hrs	2 Hz, duty cycle 1:1, 4.5V
Power Consumption	450	mW	@4.5V



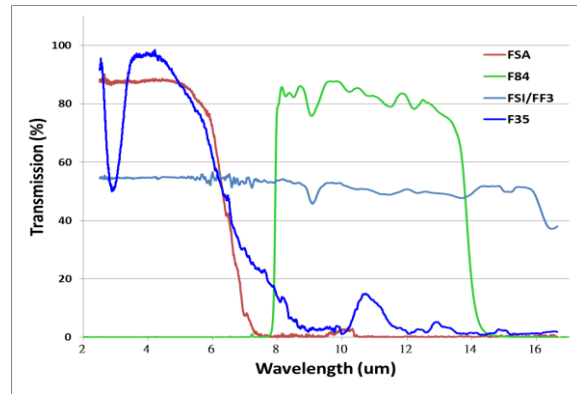
Typical Temp-Power Curve



Typical I-V Curve

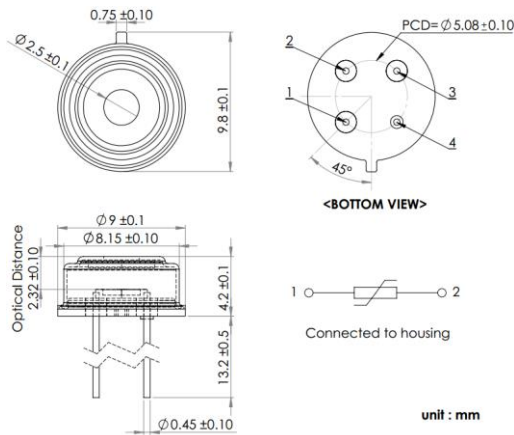


Modulation Depth vs. Frequency

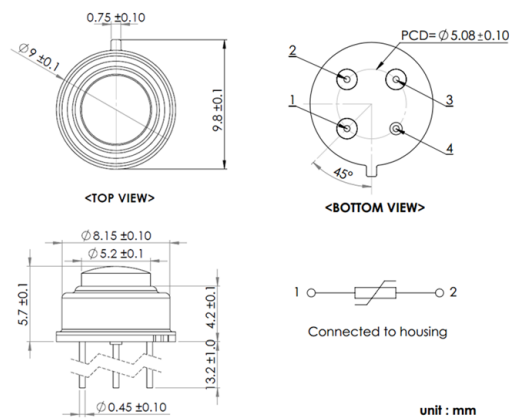


Optical Characteristic

Mechanical Dimension



F35/F84/FSA/FSI model



F3 model