OKI electronic components

OE5202G

1.55 μm Edge-Emitting LED DIP Module

GENERAL DESCRIPTION

The OE5202G is a 1.55 μm, edge-emitting LED DIP module with a single-mode fiber pigtail. The high coupling efficiency of the OKI EE-LED yields a single-mode fiber output of over 20 μW. The module is an optimal light source for optical LAN systems and measuring instruments.

FEATURES

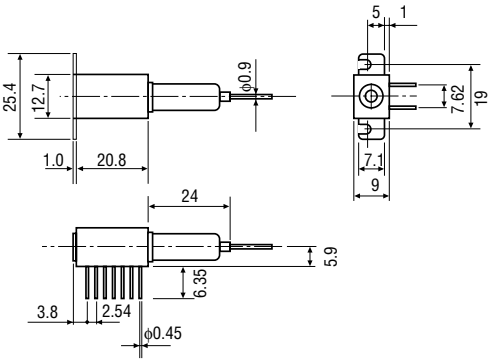
- High output power: Pf=20 μW
- Single-mode fiber
- Hermetically-sealed,14-pin Dual-In-line Package (DIP)
- Includes thermoelectric cooler for temperature control
- High speed

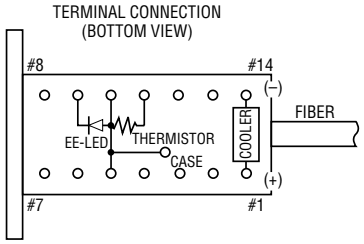
APPLICATIONS

- LANs
- Optical measuring instruments

PACKAGE DIMENSIONS (Unit: mm)

- **OE5202G**





PIN No.	FUNCTION	PIN No.	FUNCTION
1	COOLER ANODE	8	NC
2	NC	9	EE-LED CATHODE
3	NC	10	EE-LED ANODE,
4	NC		CASE GROUND
5	EE-LED ANODE,		and THERMISTOR
	CASE GROUND	11	THERMISTOR
	and THERMISTOR	12	NC
6	NC	13	NC
7	NC	14	COOLER CATHODE

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Test Conditions	Ratings	Unit
Forward Current	I_F	Ta=25°C	150	mA
Reverse Voltage	V_R		1	V
Cooler Current	Ic		1.2	A
Operating Temperature	T_{opr}	—	–20 to +65	°C
Storage Temperature	T_{stg}	—	–20 to +70	°C

OPTICAL AND ELECTRICAL CHARACTERISTICS

(T_{LED}=25°C)

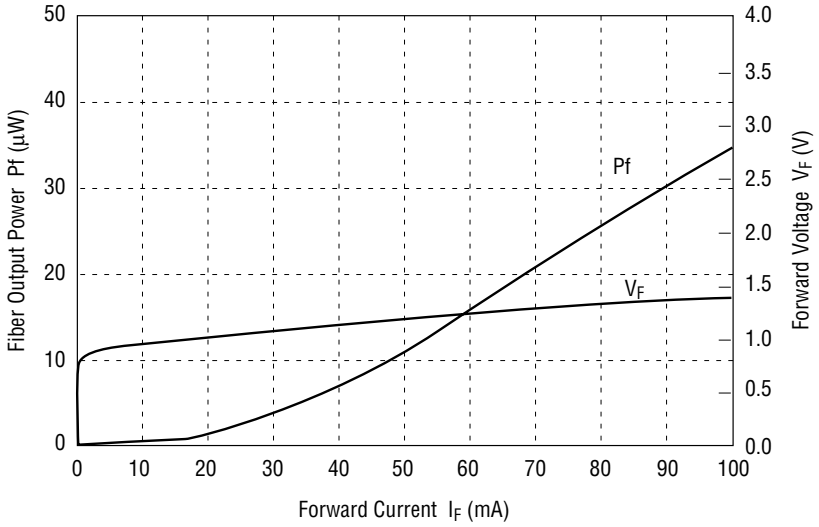
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Fiber Output	Pf	I_F=100 mA	20	24	—	μW
Peak-emission Wavelength	λp	I_F=100 mA	1520	1550	1580	nm
Spectral Bandwidth	Δλ	I_F=100 mA	—	70	140	nm
Rise TIme	t_r	I_F=75 mA	—	2	—	ns
Fall Time	t_f	+50 mAp-p	—	3	—	ns
Forward Voltage	V_F	I_F=100 mA	—	—	2.0	V
Cooler Capacity	ΔT	I_F=100 mA	40	—	—	°C
Cooler Current	Ic	ΔT=40°C	—	—	1.2	A
Cooler Voltage	Vc	ΔT=40°C	—	—	3	V
Thermistor Resistance	Rth	—	—	10	—	kΩ

FIBER PIGTAIL SPECIFICATIONS

Parameter	Specifications	Unit
Fiber Type	Single-mode	—
Mode Field Diameter	10±1	μm
Cladding Diameter	125±2	μm
Jacket Diameter	900	μm
Length	1 (Min)	m
Connector	FC	—

TYPICAL CHARACTERISTICS

Fiber Output Power vs. Forward Current



Emission Spectrum