

$\lambda = 780 \text{ nm}$, $P = 1.65 \text{ mW}$, Multimode VCSEL-780



Characteristics ($T_C = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Peak Wavelength	λ_p	770	780	795	nm	$I_f = 8 \text{ mA @ RT}$
Spectral Width (FWHM)	$\Delta\lambda$	—	0.5	1	nm	$I_f = 8 \text{ mA @ RT}$
Beam Divergence	θ	10	16	30	Deg	Full width at $1/e^2$; $I_f = 8 \text{ mA @ RT}$
Forward Voltage	V_f	1.7	2.1	2.5	V	$I_f = 8 \text{ mA @ RT}$
Threshold Current	I_{th}	0.5	1.5	3	mA	—
Slope Efficiency	$\Delta P/\Delta I$	0.12	0.24	0.4	W/A	$I_f = 8 \text{ mA @ RT}$
Optical Output Power	P_{out}	—	1.65	—	mW	$I_f = 8 \text{ mA @ RT}$
Dynamic Resistance	$\Delta V/\Delta I$	40	55	65	Ω	$I_f = 8 \text{ mA @ RT}$
Reverse Breakdown Voltage	V_{br}	—	10	—	V	—
Monitor Current	I_m	100	—	—	μA	$I_f = 8 \text{ mA @ RT}$
Dark Current	λ_r	—	0.2	1	nA	$V_r = 10 \text{ V}$
Shunt Resistance	R_p	100	200	—	G Ω	—
Breakdown Voltage	V_{br}	—	50	—	V	—
Junction Capacitance	C_p	—	40	—	pF	@ $V_r = 10 \text{ V}$, 10 kHz

Note: All data is presented as typical unless otherwise specified

ITEM#	£*	€*	RMB*
	1-5 PCS	1-5 PCS	1-5 PCS
VCSEL-780	£ 16.77	€ 21,63	¥ 205.10

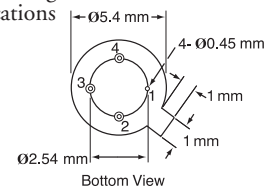
*For quantities over 5 pieces, please call our local office for pricing.

ITEM#	PRICE	PRICE	PRICE	DESCRIPTION
	1-5 PCS	6-10 PCS	11-20 PCS	
VCSEL-780	\$ 24.30	\$ 23.09	\$ 20.66	780 nm VCSEL, 1.65 mW

- Monitor Photodiode
- Flat Window Design
- Telecommunications and High-Speed Data Communications Applications
- 2.5 Gbps Speed
- Multimode

Pin Description

- 1 Case
- 2 VCSEL anode
- 3 VCSEL cathode/PD anode
- 4 PD cathode



Bottom View
Please refer to our website for complete models and drawings.

Absolute Maximum Ratings ($T_C = 25^\circ\text{C}$)

CHARACTERISTIC	MIN	MAX	CONDITION
Storage Temperature	-40 °C	100 °C	—
Operating Temperature	0 °C	70 °C	—
Continuous Forward Current	—	8 mA	—
Continuous Reverse Voltage	—	5 V	@ 10 μA

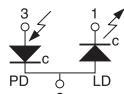
$\lambda = 780 \text{ nm}$, $P = 10 \text{ mW}$, Single Mode Thorlabs L780P010

CAUTION:
ELECTROSTATIC
SENSITIVE



Pin Description

- 1 laser cathode
- 2 common case
- 3 monitor diode anode



PIN CODE 5A

- $\varnothing 5.6 \text{ mm}$ Package
- Index-Guided MQW Structure
- $1 \times 5 \mu\text{m}$ Emitter Size
- 0.3 mA (Typ.) Monitor Current

ITEM#	£*	€*	RMB*
	1-5 PCS	1-5 PCS	1-5 PCS
L780P010	£ 15.12	€ 19,50	¥ 184.84

*For quantities over 5 pieces, please call our local office for pricing.

ITEM#	PRICE	PRICE	PRICE	DESCRIPTION
	1-5 PCS	6-10 PCS	11-20 PCS	
L780P010	\$ 21.90	\$ 20.81	\$ 18.62	Thorlabs 780 nm, 10 mW

Absolute Maximum Ratings ($T_C = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING
Optical Output Power (CW)	P_o	12 mW
LD Reverse Voltage	$V_{R(LD)}$	2 V
PD Reverse Voltage	$V_{R(PD)}$	30 V
Operating Temperature	T_{op}	-10 to 60 °C
Storage Temperature	T_{stg}	-40 to 85 °C

Characteristics ($T_C = 25^\circ\text{C}$, $P = 10 \text{ mW}$)

CHARACTERISTIC	SYMBOL	MIN	TYP.	MAX
Threshold Current	I_{th}	—	14 mA	20 mA
Operation Current	I_{op}	—	24 mA	40 mA
Operation Voltage	V_{op}	—	1.8 V	2.5 V
Slope Efficiency	η_s	0.5 mW/mA	0.65 mW/mA	0.9 mW/mA
Lasing Wavelength	λ_p	770 nm	780 nm	790 nm
Beam Divergence (//)	$\theta_{//}$	6°	8°	12°
(FWHM)	θ_{\perp}	25°	30°	32°
Astigmatism	A_s	—	10 μm	15 μm
Monitor Current	I_m	0.3 mA	0.7 mA	1.5 mA

Note: All data is presented as typical unless otherwise specified

$\lambda = 785 \text{ nm}$, $P = 25 \text{ mW}$, Single Mode Sanyo DL4140-001S

Absolute Maximum Ratings ($T_C = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING
Optical Output Power (CW)	P_o	25 mW
LD Reverse Voltage	$V_{R(LD)}$	2 V
PD Reverse Voltage	$V_{R(PD)}$	30 V
Operation Case Temperature	T_C	-10 to 60 °C
Storage Temperature	T_{stg}	-20 to 85 °C

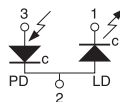
Characteristics ($T_C = 25^\circ\text{C}$, $P = 20 \text{ mW}$)

CHARACTERISTIC	SYMBOL	MIN	TYP.	MAX
Threshold Current	I_{th}	—	30 mA	50 mA
Operation Current	I_{op}	—	65 mA	90 mA
Slope Efficiency	η_s	0.3 mW/mA	0.6 mW/mA	0.8 mW/mA
Lasing Wavelength	λ_p	776 nm	785 nm	800 nm
Beam Divergence (FWHM)	$\theta_{//}$	7°	9°	12°
	θ_{\perp}	15°	25°	35°
Astigmatism	A_s	—	—	10 μm
Monitor Current	I_m	0.3	0.8	1.5 mA

Note: All data is presented as typical unless otherwise specified

Pin Description

- 1 laser cathode
- 2 common case
- 3 monitor diode anode



PIN CODE 5A

- $\varnothing 5.6 \text{ mm}$ Package
- 30 mA (Typ.) Threshold Current
- 10 μm (Max) Astigmatism

ITEM#	£*	€*	RMB*
	1-5 PCS	1-5 PCS	1-5 PCS
DL4140-001S	£ 26.91	€ 34,71	¥ 329.16

*For quantities over 5 pieces, please call a local office for pricing.

ITEM#	PRICE	PRICE	PRICE	DESCRIPTION
	1-5 PCS	6-10 PCS	11-20 PCS	
DL4140-001S	\$ 39.00	\$ 34.32	\$ 29.25	Sanyo 785 nm, 25 mW