

Single mode 850 VCSEL KCx-T46-85DA

Description

The KCx-T46-85DA consist of a single mode VCSEL of a high speed and PIN Photodiode in the tilted window package. The power monitor PD can be used with appropriate feedback control circuitry to set a constant power level for each VCSEL. The VCSEL is actively aligned with can sealing process. The VCSEL has a high coupling efficiency, high slope efficiency, low operating current and low tracking error and provides high optical performance.



Features

- 850_{nm} Wavelength Range
- High Data Rate $\geq 2.5\text{Gbps}$
- High Reliability
- Low Current and Voltage
- Single mode
- Other Configurations Available on Request

Applications

- High speed Data Communications
- Gigabit Ethernet
- Fiber Channel

Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Threshold Current	I_{th}	-	2.0	4.0	mA	CW
Slope Efficiency	η	0.1	0.2	0.4	mW/mA	$I_F=5\text{mA}$
Optical Output Power	P_o	-	1	-	mW	$I_F=5\text{mA}$
Peak Wavelength	λ_p	840	850	860	nm	$I_F=5\text{mA}$
Spectral Bandwidth	$\Delta\lambda$	-	0.5	0.85	nm	$I_F=5\text{mA}$
Beam Divergence	Θ	-	14	-	°	$P_o=1.0\text{mW}$, Full Width, $1/e^2$
Forward Voltage	V_f	-	1.8	2.2	V	$I_F=5\text{mA}$
Breakdown Voltage	V_b	-	-10	-	V	
Dynamic Resistance	R_d	-	50	-	Ω	$I_F=5\text{mA}$
Side Mode Suppression Ratio	SMSR	15	25	-	dB	$I_F=5\text{mA}$
Monitor Current	I_{PD}	-	0.5	-	mA	$P_o=1.0\text{mW}$
I_{PD} Temperature Variation	$\Delta I_{PD}/\Delta T$	-	0.2	-	%/°C	$P_o=1.0\text{mW}$
Dark Current	I_D	-	-	20	nA	$V_R=3\text{V}$
PD Reverse Voltage	BVR_{PD}	5	30	-	V	$I_R=10\mu\text{A}$
PD Capacitance	C	-	-	55	pF	$V_R=3\text{V}$, $F=1\text{MHz}$