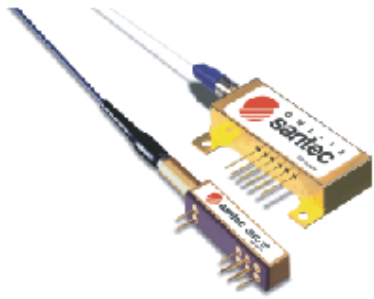


## OPTICAL WAVELENGTH LOCKER / MONITOR OWL-10/20



Santec's OWL-10 and OWL-20 wavelength lockers enable the wavelength of DWDM transmitters to be monitored and stabilized. Both products use Santec's unique single filter differential method to achieve the highest wavelength accuracy and reliability of any commercial wavelength locking device. The OWL-10 has become the industry standard and is indispensable in 50GHz and 100GHz DWDM systems. The OWL-20 provides an ultra-compact solution, only 7x7x30mm in size.

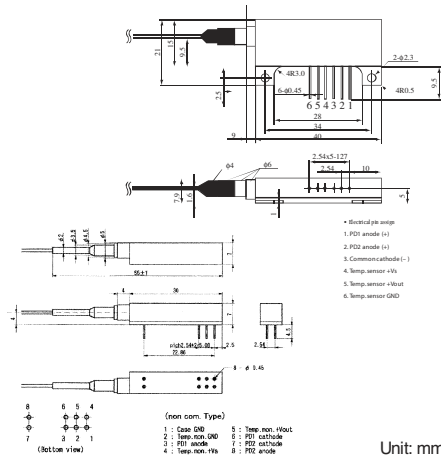
### Features

- ▶ Unique differential method using high performance optical filter
- ▶ Passive (no moving parts, no power supply required)
- ▶ Suitable for any wavelength in the C & L bands.
- ▶ Temperature insensitive @ 0~70°C (by thermal compensation)
- ▶ Wavelength accuracy <math>\pm 0.01\text{nm}</math>
- ▶ Hermetically sealed to ensure long term stability
- ▶ Small package (40 x 21 x 8 mm)
- ▶ Qualified to Telcordia GR-468.
- ▶ PM fiber option available

### Applications

- ▶ LD wavelength locking for DWDM transmitters.
- ▶ Wavelength monitoring in DWDM transmission systems.
- ▶ Wavelength management for DWDM wavelength router or OADM.
- ▶ Light source stabilization for optical information, sensing and other measurement applications.

### Dimensions



### Typical Configuration

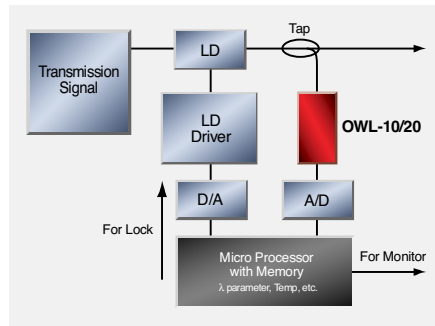


Fig.1 Application diagram of wavelength locking or monitoring of the transmitter LD.

### Specifications

Principle	Differential method using thin-film optical filter
Center Wavelength	ITU-grid (standard) or as specified
Capture Range	$\pm 0.25\text{ nm}$ (standard)
Long Term Stability (A)	$\leq \pm 0.005\text{ nm}^1$ at over 20 years
Polarization Dependence (B)	$\leq \pm 0.005\text{ nm}^1$
Overall Wavelength Accuracy (A)+(B)	$\leq \pm 0.01\text{ nm}^1$ at over 20 years (with digital temperature compensation)
Optical Input Power	+5 dBm max.
Conversion Gain	$> 0.2\text{ A/W}$ at $\lambda\text{s}$
Photo Current Ratio	0.4 min, 2.0 max. @ 0 to +70°C
PD Dark Current	$< 15\text{ nA}$
Temperature Sensor	Built-in
Package	Hermetically sealed
Pigtailed Fiber	SMF (G.652), 0.9 $\phi$ , 2m, FC - SPC (standard)
Operating Temperature	0 to +70 °C / < 90 % humidity
Storage Temperature	- 40 to +80 °C / < 90 % humidity
Reliability	Telcordia GR-000468 qualified, 100 fits max. at 25 years
Size	40 x 21 x 8 mm
Weight	50 g max.

\*1 Premium grade ( Standard grade: (A)  $\pm 0.015\text{ nm}$ , (B)  $\pm 0.005\text{ nm}$ , (A)+(B)  $\pm 0.02\text{ nm}$  )

### Ordering Code

