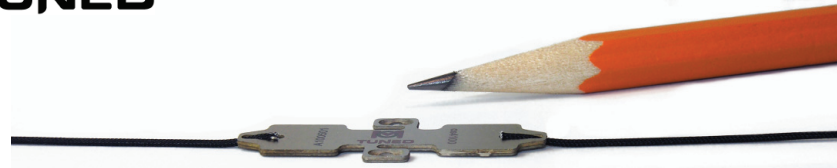


TEL:0755-83376489 83370245
 FAX:0755-83376182
 (0)13902971329
 E-MAIL:xjr5@163.com
<http://www.sensor-ic.com/>



Applications

- Use in Combination with an os3100 Optical Strain Gage for Accurate Temperature-Compensated Strain Measurements
- Relative Temperature Sensor for Automotive, Aircraft/Aerospace, Rolling Stock, Vessels, Structural, Geotechnical, Energy and Medical Equipment Monitoring

Description

The **os4100 Temperature Compensation Sensor** is a revolutionary product based on patented **Micron Optics'** micro, opto-mechanical technology. The **os4100** builds on the same technology as the highly-reliable os3100 optical strain gage, which has been tested to withstand over 100,000,000 fatigue cycles of +/- 2,000 microstrain. To ensure long-term stability by design, the **os4100** patch type sensor uses neither epoxies nor other glues as part of its structure and fuses materials science with **Micron Optics'** core optical technology in high-performance, tunable components which allows it to be branded "**Micron Optics Tuned**".

The **os4100** provides an ideal alternative to electrical temperature sensors, featuring advantages such as high accuracy, long-term stability, premium performance under harsh environmental conditions. Installation is easy as the **os4100** can be spot-welded, epoxied or fastened with screws to most materials using conventional techniques.

This sensor can be used alone or in series as part of an FBG sensor array.

The **os4100** is an industrial grade design targeting the harsh environments found in Energy, Civil, Transportation, Aerospace and Military applications and demonstrates excellent compatibility with **Micron Optics'** sensing instruments.

Please feel free to contact **Micron Optics** or one of our Authorized Value-Added Resellers about your particular optical sensing application.

Some Advantages of the os4100 Sensor Design

- **Remote Sensing Ability:** Ideal for applications with long distances between sensors or between sensors and instrument
- **Easy to Install:** Can be mounted directly to most materials via epoxy, screws or spot welding
- **Simple to Muxplex:** Easily facilitates multiple sensors on a single optical connection
- **Non-Electrical Sensor Design:** Eliminates ESD and spark hazard, and immune to electromagnetic interference
- **Ideal for Harsh Environments:** Small in size, uses lightwaves not visible to the naked eye, no electromagnetic field generation by the sensor



PRELIMINARY

Specifications

os4100

Beta Prototype¹

Environmental & Mechanical

Number of Sensors	1 (one)
Gage Type	Surface-Mount
Fastening Methods	
Screws	1-72 (M1.6)
Spot Weld	50 joules max, mounting tabs only
Epoxy	Mounting tabs only
Operating Temperature Range	-40 to 120°C (150°C short term)
Temperature Sensitivity	~ 28.9 pm/°C (+/-0.5pm/°C)
Short-Term Repeatability ²	± 0.75°C (±21 pm)
Drift ³	± 1.0°C (±29 pm)
Dimensions	36 mm x 12 mm x 1 mm
Weight	3.0 g
Frame Material	302 Stainless
Fiber Type	SMF28-C
Fiber Coating	Polyimide
Buffer Tube	Fiberglass Braid
Pigtail Length	1 m (± 10 cm)
Connectorization	None (FC/APC available at an additional fee)
Pigtail Temperature Range	-40 to 150° C (Connectors: -40 to 80°C)
Pigtail Minimum Bend Radius	12 mm

Optical

Center Wavelength (±1 nm)	From 1465nm to 1617nm in 4nm Intervals
Peak Reflectivity (Rmax)	> 70%
FWHM (-3 dB point)	0.25 nm (± .05 nm; apodized grating)
Isolation	> 12 dB (@ ± 0.4 nm around center wavelength)

080314sv

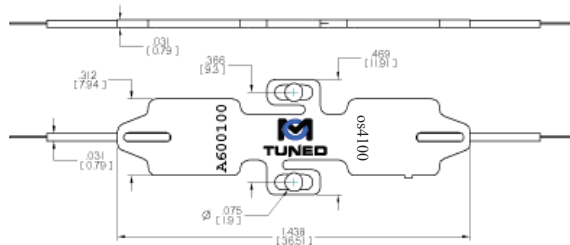
Connectorization Options Available at an additional fee

Option 1: Fusion-Spliced FC/APC	Includes metal splice sleeve and loose buffer (adds ~1m to pigtail length)
Option 2: Splice-Free FC/APC	Includes loose buffer (adds no length to pigtail)
Option 3: Fusion-Spliced E2000	Includes metal splice sleeve and loose buffer (adds ~1m to pigtail length)
Option 4: Other	Contact MOI

¹ Test data results obtained from a sampling of current design.

² Three thermal cycles from min to max temperature.

³ Typical: 50°C and 85% Relative Humidity. Extreme conditions: ±1.3°C (±36pm); 1,000 hour soak 75°C and 75% Relative Humidity.



SUNSTAR实业集团是集研发、生产、工程、销售、代理经销、技术咨询、信息服务等为一体的高科技企业，是专业高科技电子产品生产厂家，是具有 10 多年历史的专业电子元器件供应商，是中国最早和最大的仓储式连锁规模经营大型综合电子零部件代理分销商之一，是一家专业代理和分销世界各大品牌IC芯片和电子元器件的连锁经营综合性国际公司。在香港、北京、深圳、上海、西安、成都等全国主要电子市场设有直属分公司和产品展示展销窗口门市部专卖店及代理分销商，已在全国范围内建成强大统一的供货和代理分销网络。我们专业代理经销、开发生产电子元器件、集成电路、传感器、微波光电元器件、工控机/DOC/DOM电子盘、专用电路、单片机开发、MCU/DSP/ARM/FPGA软件硬件、二极管、三极管、模块等，是您可靠的一站式现货配套供应商、方案提供商、部件功能模块开发配套商。专业以现代信息产业（计算机、通讯及传感器）三大支柱之一的传感器为主营业务，专业经营各类传感器的代理、销售生产、网络信息、科技图书资料及配套产品设计、工程开发。我们的专业网站——**中国传感器科技信息网（全球传感器数据库）www.SENSOR-IC.COM** 服务于全球高科技生产商及贸易商，为企业科技产品开发提供技术交流平台。欢迎各厂商互通有无、交换信息、交换链接、发布寻求代理信息。欢迎国外高科技传感器、变送器、执行器、自动控制产品厂商介绍产品到 中国，共同开拓市场。本网站是关于各种传感器-变送器-仪器仪表及工业自动化大型专业网站，深入到工业控制、系统工程计 测计量、自动化、安防报警、消费电子等众多领域，把最新的传感器-变送器-仪器仪表买卖信息，最新技术供求，最新采购商，行业动态，发展方向，最新的技术应用和市场资讯及时的传递给广大科技开发、科学研究、产品设计人员。本网站已成功为石油、化工、电力、医药、生物、航空、航天、国防、能源、冶金、电子、工业、农业、交通、汽车、矿山、煤炭、纺织、信息、通信、IT、安防、环保、印刷、科研、气象、仪器仪表等领域从事科学研究、产品设计、开发、生产制造的科技人员、管理人员、和采购人员提供满意服务。 **我公司专业生产、代理、经销、销售各种传感器、变送器、敏感元器件、开关、执行器、仪器仪表、自动化控制系统：专门从事设计、生产、销售各种传感器、变送器、各种测控仪表、热工仪表、现场控制器、计算机控制系统、数据采集系统、各类环境监控系统、专用控制系统应用软件以及嵌入式系统开发及应用等工作。如热敏电阻、压敏电阻、温度传感器、温度变送器、湿度传感器、湿度变送器、气体传感器、气体变送器、压力传感器、压力变送、称重传感器、物（液）位传感器、物（液）位变送器、流量传感器、流量变送器、电流（压）传感器、溶氧传感器、霍尔传感器、图像传感器、超声波传感器、位移传感器、速度传感器、加速度传感器、扭距传感器、红外传感器、紫外传感器、火焰传感器、激光传感器、振动传感器、轴角传感器、光电传感器、接近传感器、干簧管传感器、继电器传感器、微型电泵、磁敏（阻）传感器、压力开关、接近开关、光电开关、色标传感器、光纤传感器、齿轮测速传感器、时间继电器、计数器、计米器、温控仪、固态继电器、调压模块、电磁铁、电压表、电流表等特殊传感器。同时承接传感器应用电路、产品设计和自动化工程项目。**

欢迎索取免费详细资料、设计指南和光盘；产品凡多，未能尽录，欢迎来电查询。

更多产品请看本公司产品专用销售网站：

中国传感器科技信息网：<http://www.sensor-ic.com/>工控安防网：<http://www.pc-ps.net/>

电子元器件网：<http://www.sunstare.com/>微波光电产品网：[HTTP://www.rfoe.net/](http://www.rfoe.net/)

消费电子产品网：<http://www.icasic.com/>军工产品网：<http://www.junpinic.com/>

实业科技产品网：<http://www.sunstars.cn/>传感器销售热线：

电话：0755-83607652 83376489 83376549 83370250 83370251

传真：0755-83376182 (0) 13902971329 MSN: SUNS8888@hotmail.com

邮编：518033 E-mail:szss20@163.com QQ: 195847376

技术支持：0755-83394033 13501568376