

Newsletter March 2010

In this issue we feature new products being offered by the company through its trading division ALRAD ELECTRONICS. If you would like more information on any of the products featured in this newsletter telephone 01635 30345 or email our product specialists at electronics@alrad.co.uk

Photodiodes for infrared industrial sensing

Centronic series 91R photodiodes offer high sensitivity in the mid infrared. They are fabricated using GaAlAsSb/GaInAsSb heterostructures and are particularly well suited to applications in the 1.8-2.3 μm range. Packaging options include standard TO housings with or without thermoelectric cooling as well as chip on board. These devices are particularly well suited for applications based on absorption analysis.

Applications include: -

- Gas sensing
- Optical pyrometry
- Flame measurement
- Eye safe designator detection
- Impurity detection
- Radiometry



Highly stabilized diode lasers for imaging applications

The ZQ-HP lasers are designed for high precision measurements in imaging applications.

- thermal high-stabilized diode Laser for precision measurements
- long-term wavelength stability better than 0.2nm
- high pointing stability at small spot size
- wavelength can be tuned by choosing diode temperature within certain range
- wide range of line and dot optics, customized point and line raster glass

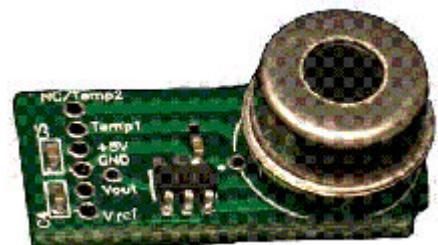
Optical Elements (DOEs)

- optional: coupling into multi mode fibre
- wide wavelength range from 488nm - 1064nm with output power, up to 5000mW available



Thermopile Development Tool- Miniature Amplifier PCB

Available in three amplifier gains: 300, 500 and 1,000, this PCB includes a LM20 temperature sensor and 1.25V voltage reference. Although sized for single channel TO-5 packages, this amplifier is electrically compatible with all Dexter Research Center detectors, providing convenient buffering and pre-amplification of thermopile signal. The amplifier circuit board is impressively small (0.35" x 0.85") and is designed around the AD8628 amplifier with ultra low offset ($<1\mu\text{V}$), low drift ($<0.005\mu\text{V}/^\circ\text{C}$), and low bias current (100pA). The Mini Amp will operate on a 2.7V to 5.5V single supply, is chopper stabilized and has greatly reduced digital switching noise (0.5 μV p-p from 0Hz to 10Hz, input referred).



Pearson Electronics Current Monitors

The latest Pearson high precision current monitors include: -



Model 6027

a coaxial current monitor that allows you to easily measure current within a coaxial cable system.

Model 5834

a high sensitivity current monitor that allows you to measure smaller current with large output.

Model 7450

a 6" aperture clamp-on current monitor for measurements with large conductors



Cost effective laser receiver LR-4

The LR-4 Series of photodiode receiver modules is designed for use in scientific, industrial, educational and OEM applications. The LR-4 series offers a versatile and cost effective solution to suit most receiver requirements. The unit includes reverse polarity and over voltage protection and is available in a range of pre-set optical threshold levels.

- Bandwidth 350 - 1100nm
- Sensitivity 10uW/cm² - 10mW/cm²
- Output Digital Levels (+Vcc, 0V)
- Operating Voltage 3-6V
- Operating Current <12mA



MD Series Temperature Sensor Module

The MD Series Temperature Sensor Module infrared thermometer is the low cost solution for non-contact temperature measurements. The sensor is integrated with signal conditioning that reliably produces a calibrated temperature output in a plug and play package, with options. Programmable outputs and flexible supplies yield a turnkey solution for medical, consumer, commercial and industrial applications. Available to support the MD Series Temperature Sensor module is an evaluation Kit which allows developers to configure the TSM for virtually any application quickly. Customers can quickly evaluate the TSM for temperature ranges, optics, etc. to find the best configuration to meet their application needs without the need to design any additional hardware. Once the best configuration is established, customers can easily configure the TSM for their own use. The evaluation kit consists of FS USB evaluation board (EVB), pre-programmed with USB a boot loader and demonstration firmware, a standard USB cable for use in communicating with the board, an MD-0003 TSM detector, CD-ROM, containing the PC USB HID driver and evaluation software and a quick start guide.



Contact Image Sensors or CIS modules are used in a variety of imaging applications.

The more common applications are fax machines, copiers and document readers. The CIS module is the light bar you see moving across the paper inside the copier. It serves to both illuminate and image the document as it scans past. However, CIS modules are now being used in many applications including bar code readers, position sensors and vending machines to name just a few. Resolution is important in all these applications and with two new sensors you can change resolution on the fly. CMOS Sensor has produced two image sensors with selectable resolution for use in CIS modules. The C116 is selectable between 300 and 600 dpi while the C118 is selectable between 200 and 400 dpi. Now you can double your system resolution at the flip of a switch. These two CIS module families are finding application in the world of counterfeit detection. Check readers and currency readers are becoming more sophisticated as more anti-counterfeiting measures are employed in the production of both world currencies and checks. Equipped with UV, Infrared and visible illumination, these modules are capable of scanning multiple spectra at high speed.



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