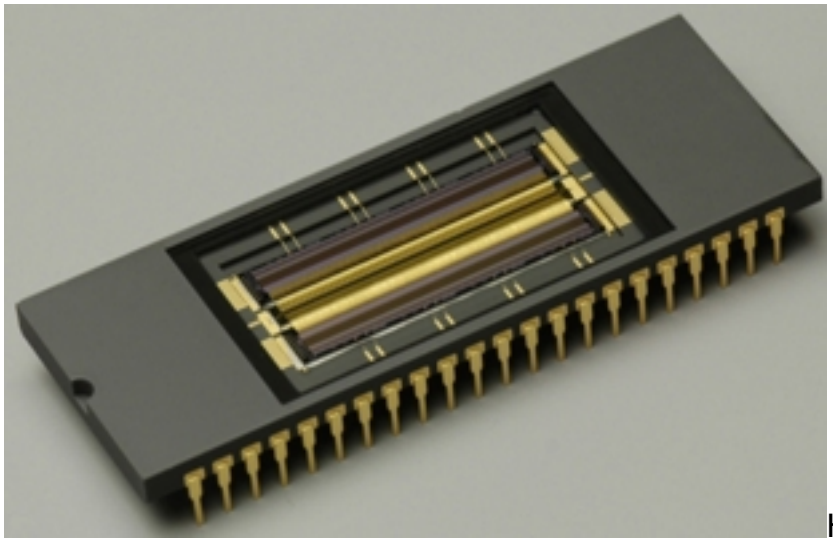
High Speed Linear Image Sensors



Hamamatsu Photonics introduce the high speed G10768-1024D InGaAs linear image sensors and the new C10854 multichannel detector head to meet increasing industrial requirements to measure foreign bodies on-line in the near infrared range (wavelength range from 800 nm to 1700 nm).
The G10768 devices features 1024 individual InGaAs photodiode pixels, combined with a low noise CMOS trans-impedance amplifier and multi-plexor readout circuit, to simplify operation. In addition a selectable feedback capacitance is available allowing choice of on-chip gain to increase dynamic range. The device has a pitch of 25mm and is capable of very high speed readout rates, in excess of 40,000 lines per second.

When used with the new C10854 multichannel detector head, the G10768 becomes a very powerful tool. The C10854 allows easy operation of the G10768, offering a high-speed readout, single +5 V supply voltage, 16-bit AD converter and simple CamerLink interface. Not only is the combination of the G10768 series and C10854 more cost effective, but also it is smaller than many other products on the market, making it more suited for integration into an existing system.

Applications for the G10768 and C10854 are found in on-line infrared inspection of products, including process monitoring, foreign body detection such as fragments of glass, re-cycling and sorting of different plastic materials by near IR spectroscopy, analysis of sugars, proteins and fats for in-line food inspection, petrochemical analysis and many more.

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