MSHシステムズ株式会社
MSH Systems, Inc.

分光計測用冷冷却ＣＣＤ検出器
MRC-2048シリーズ

Key Features and Benefits

- **15µm x 15µm Pixels**
  Optimized pixels for high dynamic range and resolution
- **TE cooling options to -70°C**
  Minimizing noise with Pentavac Cooling Technology
- **Low Readout Noise <5e-**
  Enables lowest detection limit
- **Compact and Rugged Platform**
  Ideal for OEM integration
- **Spectral Rates of up to 212SPS**
  Higher throughout Experiments

Resolution	2048 x 264
Digital Output	16 bit
Non Linearity	<1%
Spectral Rate	212 SPS

PentaVac　USB 2.0

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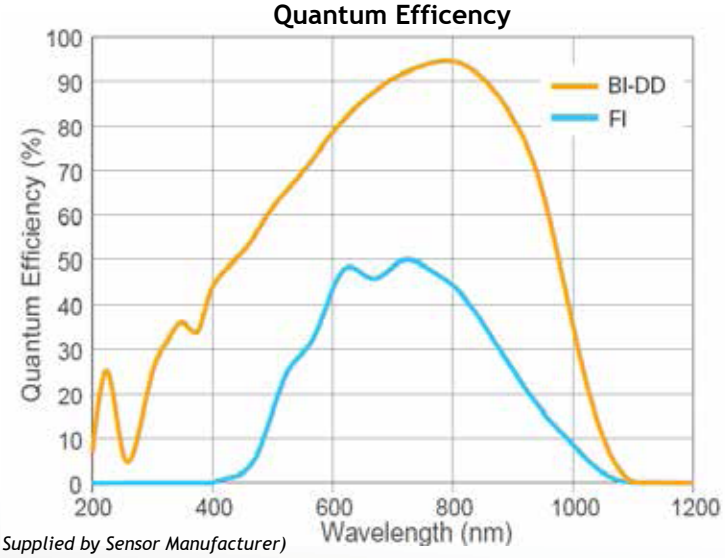
Specification

Model	2048-FI-40	2048-BI-40	2048-FI-70	2048-BI-70
Sensor	E2V CCD 261			
Sensor type	FI	BI-DD	FI	BI-DD
Active Pixel	2048 x 264			
Pixel Size	15µm x 15µm			
Active Area	30.7mm x 4.0mm			
Digital Output	16 bit			
Non Linearity	<1%			
Cooling in ambient of 25˚C	*Deep Cooled - 40ºC*		*Turbo Cooled - 70ºC*	
Readout Noise (@500Hz)	<8e- (Typ : <5e-)			
Peak Quantumn Efficency	50% @ 730nm	95% @ 800nm	50% @ 730nm	95% @ 800nm
Accessible Pixel Well Depth	>110ke-	>90ke-	>110ke-	>90ke-
Dark Current (e/p/s)	<1.0 <0.29(Typ)	<3 <1.5(Typ)	<0.03 <0.007(Typ)	<0.1 <0.03 (Typ)
Total Power Consumption	<18W		<50W	
Intergration Times	up to 60 minutes			
Pixel Readout Rate	500kHz			
Image Clock Speed	32µs/16µs			
Spectral Aquisition Rate	up to 212SPS			
Data Interface	USB 2.0			
Synchronisation	Trigger in and Out - TTL compatiable			
Power Supply	12V DC ± 10%			
Operating Temperature	-20˚C to +55˚C			
Storage Temperature	-40˚C to +70˚C			
Dimensions (excluding standard mounting)	80mm x 80mm x 90 mm			
Flange mounting Hole Dimensions	90mm x 52 mm			
Weight	<750g			

Note 1 : compatiable with most spectrographs

Quantum Efficency



(Data Supplied by Sensor Manufacturer)

Achievable Spectral Rates (SPS)

Height	IClock = 32µs	IClock = 16µs
264	76	113
30	180	198
20	191	205
10	203	212
Note 2 : Height reduction requires optical mask		
Note 3: Iclk = 16µs may result in lower well depth		

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