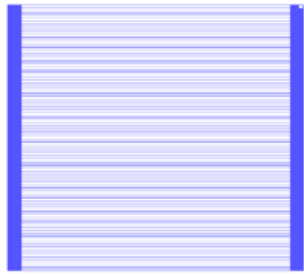


Bi-Facial Growth (BFG) Concentrator Solar Cells

Dimensions and General Information

PN#: BFG3-2BB-1010-A10



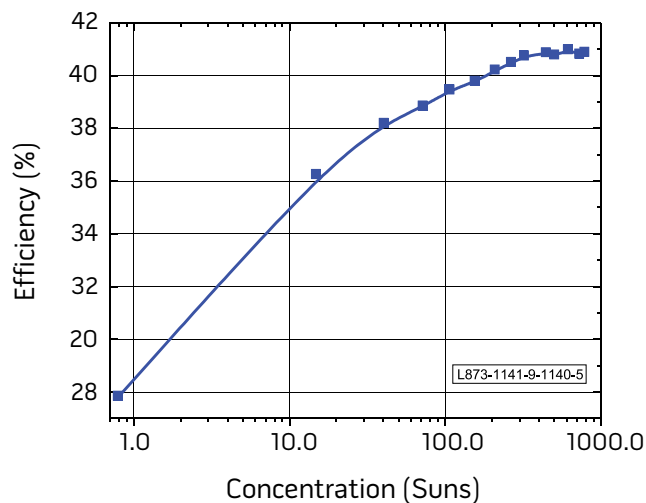
Die area: 11.2mm x 10.1mm
 Inside Photoarea: 10mm x 10mm
 Photoarea incl. die edges: 1.022cm²
 Busbars: 0.5mm
 Thickness: 0.625mm

- > Concentration range from 1 to 1200 suns
- > Operating temperature from -20 to 100C
- > Broadband anti-reflection coatings available on cells for match to air or glass

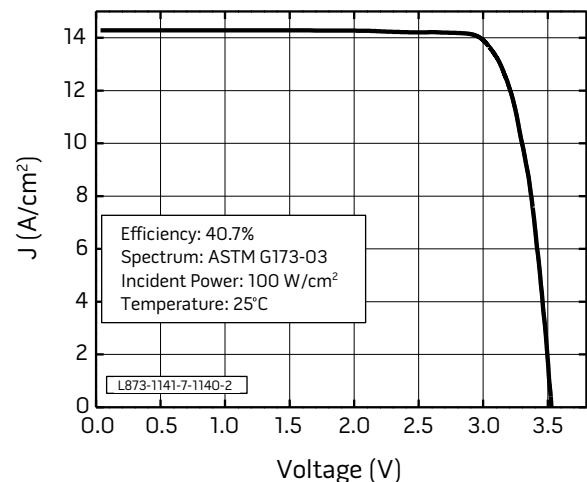
3 Junction InGaP/GaAs/InGaAs World Record Concentrator Cell Using Unique Bi-Facial Growth (BFG) On 4-inch GaAs Wafers

Typical Performance Data at AM 1.5D			
L873-1141-7-1140-2			
25C	1X	498X	1017X
Efficiency	0.307	0.412	0.405
Std. Dev/Avg.	7.7%	1.6%	1.2%
Voc (V)	2.762	3.461	3.519
Std. Dev/Avg.	3.7%	0.3%	0.3%
Jsc (A/cm ²)	0.0138	6.874	14.039
Std. Dev/Avg.	1.2%	2.2%	0.9%
FF	0.806	0.864	0.835
Std. Dev/Avg.	5.9%	1.4%	1.1%
Vmp (V)	2.383	3.092	3.014
Std. Dev/Avg.	7.0%	0.8%	0.7%
Jmp (A/cm ²)	0.0129	6.644	13.681
Std. Dev/Avg.	2.5%	2.2%	1.2%
Pmp (W/cm ²)	0.0307	20.546	41.234
Std. Dev/Avg.	7.7%	2.5%	1.3%

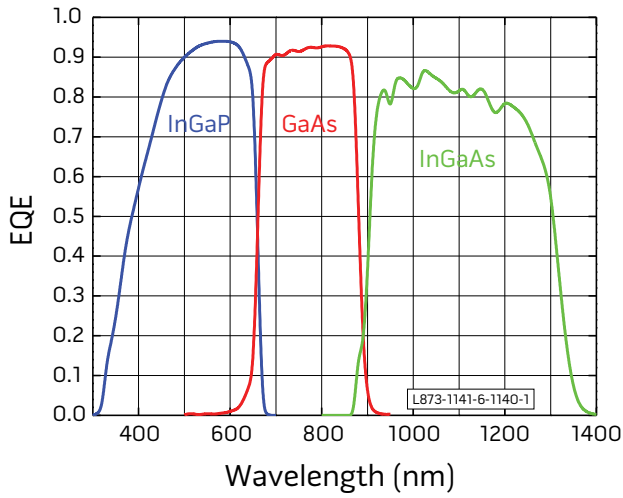
Efficiency vs. Concentration, 25° C



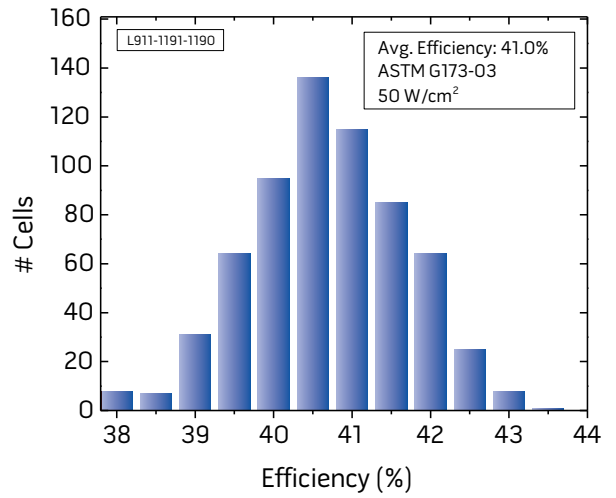
Typical IV Curve at 1000 Suns, 25° C



Tandem External Quantum Efficiency, 25°C



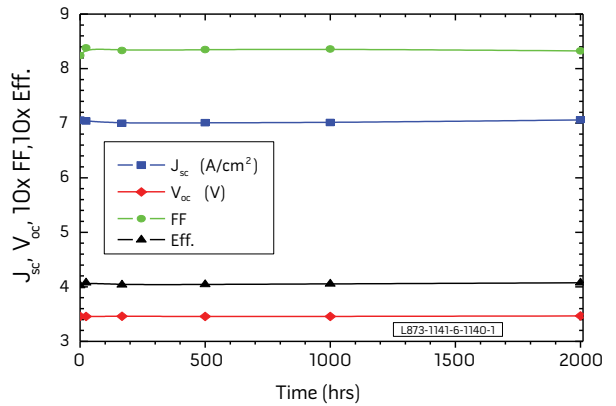
Efficiency Distribution, 500 suns, 25°C



Temperature Coefficients at 500 suns (20°C- 70°C)

	Absolute		L897-1160-21143-4	Relative	
dEff/dT	-0.062	%/°C	(1/Eff) (dEff/dT)	-0.001596	/°C
dVoc/dT	-3.924	mV/°C	(1/Voc) (dVoc/dT)	-0.001159	/°C
dJsc/dT	-2.060	mA/cm²/°C	(1/Jsc) (dJsc/dT)	-0.000277	/°C
dFF/dT	-0.008	%/°C	(1/FF) (dFF/dT)	-0.000001	/°C

Reliability data at 165°C to 2000 hrs. Tested at AM 1.5D, 25°C



Masimo Semiconductor • A Wholly Owned Subsidiary of Masimo Corporation

25 Sagamore Park Road • Hudson, NH 03051 • Tel 603.595.8900 • Fax 603.595.0975

sales@masimosemi.com • www.masimosemiconductor.com

