



## Module Features

- High-efficiency CPV module using EMCORE's multi-junction solar cells
- Optimized for low-cost, utility-scale installations
- Small temperature coefficient for power provides more power at high temperature (50°C) sites
- Passive cooling using finned heatsink keeps temperature low (<40°C above ambient)
- Large acceptance angle for reduced tracker requirements
- Smooth glass front with a silicone-on-glass lens provides long-term, reliable operation
- Certified and listed to IEC-62108 and UL-SUB-8703

Module Specifics		
Total Area (m <sup>2</sup> )	1.7	
Total Weight (kg)	57	
Dimensions (meters)	length	1.71
	width	1.05
	height	0.64
Acceptance Angle (degrees)	+/-0.7	
V <sub>oc</sub> (V, nominal at STC)	47.7	
I <sub>sc</sub> (A, nominal at STC)	11.9	
V <sub>mp</sub> (V, nominal at STC)	40.4	
I <sub>mp</sub> (A, nominal at STC)	11.4	

## Module Advantages

EMCORE's Concentrator Photovoltaic (CPV) Module is designed for utility-scale solar installations in high irradiance locations. As one of the world's largest supplier of III-V solar cells for concentrator systems, EMCORE is uniquely qualified to optimize module optics and subsystem components for world-class quality, cost, and performance.

EMCORE's CPV module achieves 28% dc efficiency at 1090X concentration to provide *solar power where solar power matters*. An innovative heatsink design allows for passive cooling with cell temperatures ~40°C above ambient, enabling power production in the hot, dry climates associated with high solar flux. A smooth glass front with a silicone-on-glass lens technology provides a robust interface to weather and is easily cleaned. The G3-1090X module is approved as incentive eligible through the California Energy Commission's (CEC's) rebate programs.

Specifications	Standard Test Conditions	PVUSA Test Conditions
DNI (W/m <sup>2</sup> )	1000	850
Air Mass	AM1.5D	AM1.5D
Cell Temperature (°C)	25	--
Ambient Temperature (°C)	--	20
Wind Speed (m/s)	--	1
DC Efficiency	28%	27%
Peak Power (Wdc)	455	375



Modules on Generation III Tracker

Module Temperature Coefficients	
V <sub>oc</sub> TC	-0.0675 V / °C
I <sub>sc</sub> TC	0.0013 A / °C
Power TC	-0.2% / °C

Module Electrical Connections	
POS (+)	Tyco 1394738-3
NEG (-)	Tyco 1394738-4
Ground Point	Pre-drilled Hole



IEC-62108

