



# Zytech CPV

High efficiency  
and zero emissions at Low Cost



# Zytech Concentrated Photovoltaics (CPV)

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Zytech's leading Concentrated Photovoltaics (CPV) technology combines high-efficiency solar cells with advanced concentrating components to provide high energy yield using limited amount of photovoltaic material used in traditional photovoltaic systems.

By concentrating sunlight using innovative components onto a small area of high-efficiency solar cell material, Zytech CPV systems dramatically reduce the amount of expensive and often supply-constrained solar material used in the system.

Zytech CPV panels are integrated with dual axil trackers and tracker control systems which are optimized for the Zytech panels, maintaining always high energy output.

- High efficiency cells greater efficiency compared to the efficiency of silicon PV cells
- High performance at high temperatures not impacted by temperature degradation as are silicon PV cells
- Durable mirror components
- Low optical losses for high efficiency
- Wide acceptance angle for high yield and lower cost
- Robust cell design



Zytech Solar has focused its own technology on the development of low and medium concentration technology.

LCPV and MCPV

## Concentrated Photovoltaics

Concentrated Photovoltaics (CPV) is increasingly been recognized as the technology which holds the greatest promise in meeting the energy challenges facing the world.

A concentrating photovoltaic (CPV) system converts light energy into electrical energy in the same way that conventional photovoltaic technology does.

The difference in the CPV technologies lies in the addition of an optical system that focuses a large area of sunlight onto each cell.

Concentrating photovoltaics has been an established science for many years, but is only now reaching commercial viability.

- Low concentration, where the magnification ratio is less than 10X
- Medium concentration, between 10X and 100X
- Potential for solar cell efficiencies greater than 40%
- No moving parts
- No intervening heat transfer surface
- Near-ambient temperature operation
- No thermal mass; fast response
- Reduction in costs of cells relative to optics
- Scalable to a range of sizes

BEST PERFORMANCE AND COMPETITIVE COST

# LCPV

## Zytech 2.5X LCPV

Low Concentration PV module with the following features:

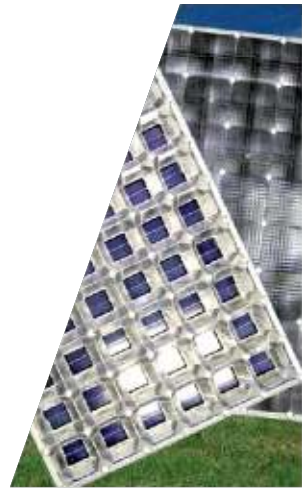
- 2.5 X concentrator system
- 4 String solar cell
- Cost effective
- Designed for long term durability and reability
- Suitable for use in fixed-tilt systems or low precision single/dual axis trackers
- Normal operating cell temperature as standard module

## Zytech 4X LCPV

Low Concentration PV module with the following features:

- 4 X concentrator system
- Cost effective
- Designed for long term durability and reability
- Suitable for use in fixed-tilt systems or low precision single/dual axis trackers
- Normal operating cell temperature as standard module

		LCPV-36	LCPV-48
<b>ELECTRICAL DATA</b>			
Maximum Power*	<i>P<sub>max</sub></i>	115W	150W
Open Circuit Voltage	<i>V<sub>oc</sub></i>	22.15	29.45
Max Power Point Voltage	<i>V<sub>mpp</sub></i>	17.45	23.25
Short Circuit Current	<i>I<sub>sc</sub></i>	7.15A	7.15A
Max Power Point Current	<i>I<sub>mp</sub></i>	6.55A	6.55A
Cells per module		36	48
<b>DIMENSIONS</b>			
Cell (L) x (W)	<i>cm</i>	7.8 x 7.8	7.8 x 7.8
Module (L) x (W) x (D)	<i>cm</i>	102x102x13.5	134x102x13.5
Module Weight	<i>kg</i>	18	24
<b>MECHANICAL</b>			
Frame:		Pc + ABS	
Front		PMMA Lens	
Back		Aluminium	
Cell Encapsulation		EVA	
Junction Box		EVAPPE– Ip65	
Connector		MC Type 4	
<b>TEMPERATURE COEFFICIENT</b>			
Current Temperature Coefcient		+4.40 mA/K	
Power Temperature Coefcient		-0.46 %/K	
Noct Normal Operating Cell Temperature		60°C ± 2°C	
<b>LIMITS</b>			
Operating Temperature Limits		-25°C to +85°C	
Power Tolerance		±3%	
Maximum System Voltage		1,000V DC	



# MCPV

## Zytech 120X MCPV

Medium Concentration PV module with the following features:

- 120 X concentrator system
- Cost effective
- Designed for long term durability and reability
- Suitable for use in fixed-tilt systems or low precision single/dual axis trackers
- Normal operating cell temperature as standard module

		MCPV-36	MCPV-48
<b>ELECTRICAL DATA</b>			
Maximum Power*	<i>P<sub>max</sub></i>	115W	150W
Open Circuit Voltage	<i>V<sub>oc</sub></i>	22.08	29.39
Max Power Point Voltage	<i>V<sub>mpp</sub></i>	17.41	23.22
Short Circuit Current	<i>I<sub>sc</sub></i>	7.18A	7.18A
Max Power Point Current	<i>I<sub>mp</sub></i>	6.62A	6.62A
Cells per module		36	48
<b>DIMENSIONS</b>			
Cell (L) x (W)	<i>cm</i>	2.0 x 2.4	2.0 x 2.4
Module (L) x (W) x (D)	<i>cm</i>	102x102x21	134x102x21
Module Weight	<i>kg</i>	21	27
<b>MECHANICAL</b>			
Frame:		Pc + ABS	
Front		PMMA Lens	
Back		Aluminium	
Cell Encapsulation		EVA	
Junction Box		PPE– Ip65	
Connector		MC Type 4	
<b>TEMPERATURE COEFFICIENT</b>			
Current Temperature Coefcient		+4.40 mA/K	
Power Temperature Coefcient		-0.46 %/K	
NOCT Normal Operating Cell Temperature		70°C ± 2°C	
<b>LIMITS</b>			
Operating Temperature Limits		-25°C to +85°C	
Power Tolerance		±3%	
Maximum System Voltage		1,000V DC	



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