UNICOR, FEDERAL PRISON INDUSTRIES

Solar Modules Made in the USA

Datasheet: Model PVM220PS; 200—240 watts

Making Renewable Energy Work

Federal Prison Industries (FPI) is a wholly owned government corporation within the Department of Justice. We focus on creating quality, cost effective products while assisting our Federal customers in meeting various procurement requirements. Our solar modules meet the requirements of the Buy American Act, Trade Agreement Act and the American Recovery & Reinvestment Act. We provide the expertise to help your agency meet all Federal renewable energy guidelines, including EPACT 2005, EISA 2007, & Executive Orders 13423 and 13514.

Affordable Domestic Photovoltaic Panels

FPI's PV modules are domestically sourced and produced in our factories in Sheridan, OR and Otisville, NY. With an annual manufacturing capacity of 74 MW, our ISO 9001 certified factories produce high-quality, efficient modules that are CEC listed and UL 1703 approved.

Turn-Key Services and Support

FPI provides turn-key services and support for Federal government agencies. We work closely with solar power providers, installers, energy service companies and financiers to develop & deliver your renewable energy system, including projects with appropriated funds and projects that are owned and operated by a third party. Our wide range of services includes:

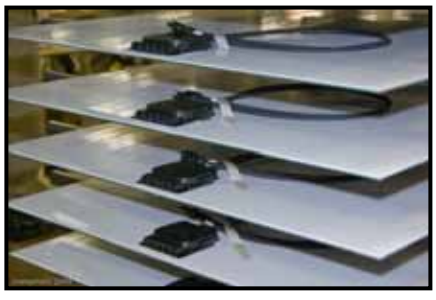
- ⇒ Contracting
- ⇒ Project Finance
- ⇒ Project Management
- ⇒ Customized Technology Solutions
- ⇒ Systems Design
- ⇒ Facility Upgrades
- ⇒ Installation
- ⇒ Operation and Maintenance

About FPI

Federal Prison Industries, also known as UNICOR, is a self-funded, self-supporting government corporation that provides technical training and meaningful work experience to federal inmates. Many inmates in FPI's program have become productive citizens and support their families, saving taxpayers money and benefiting society.

A Sustainable Solution

Whether you need high quality photovoltaic solar modules, predictable and controlled energy sourcing, on site energy supply, or federal government procurement expertise, Federal Prison Industries is your sustainable solution!



FPI/UNICOR DATASHEET

200—240 WATT MODULES

Electrical Characteristics (STC)						
Model PVM220PS-	Pmax (watts)	Vmax (V dc)	Imax (A dc)	Voc (V dc)	Isc (A dc)	Module Efficiency
(ZZZZ)200(X)	200	27.8	7.29	36.2	7.81	12.4
(ZZZZ)205(X)	205	28.2	7.36	36.4	7.87	12.7
(ZZZZ)210(X)	210	28.6	7.43	36.7	7.93	13.1
(ZZZZ)215(X)	215	29.0	7.50	36.9	7.99	13.4
(ZZZZ)220(X)	220	29.4	7.57	37.1	8.05	13.7
(ZZZZ)225(X)	225	29.7	7.66	37.4	8.11	14.0
(ZZZZ)230(X)	230	30.1	7.73	37.6	8.17	14.3
(ZZZZ)235(X)	235	30.5	7.79	37.9	8.24	14.6
(ZZZZ)240(X)	240	30.8	7.88	38.1	8.30	14.9

5 year limited warranty on materials and work-manship

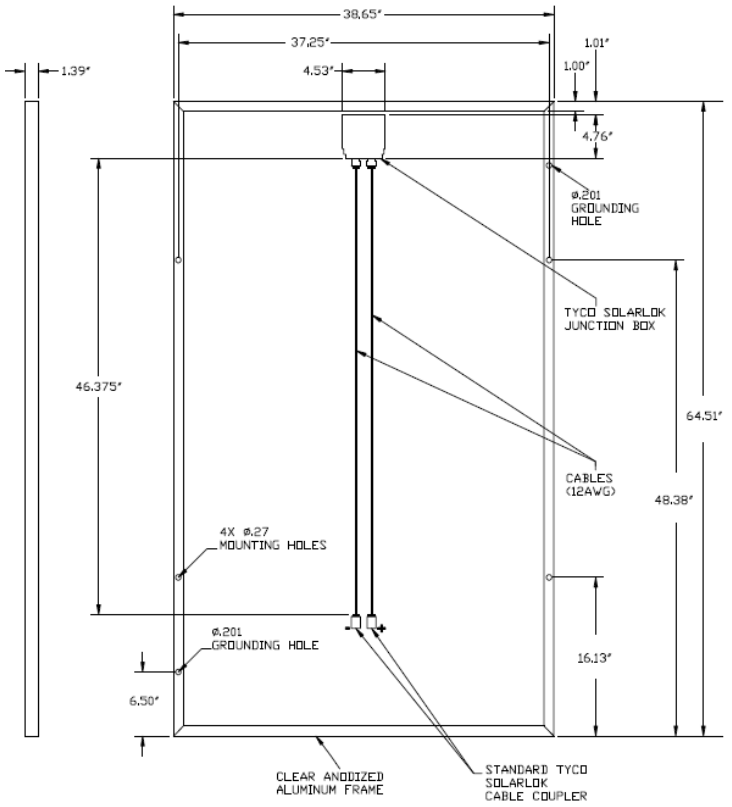
12 year limited warranty on 90% of power output

25 year limited warranty on 80% of power output

- 25 panels/pallet
- Certified to UL 1703 standards

Operating Module Temperature	-40 to 85°C
Maximum Series Fuse Rating	15 A
Nominal Voltage	24 V
Limiting Reverse Current	8.3 A
Maximum system voltage	600V
Power output tolerance	-0/+4.999 watts
Current Temperature Coefficient	0.04 to 0.08 %/°C
Voltage Temperature Coefficient	-0.45 to -0.36 %/°C
Power Temperature Coefficient	-0.68 to -0.52 %/C

Parameter	Symbol	PVM220PS-M156210	PVM220PS-M156230
Performance at NOCT	Pmax	153.69	168.88
	Vpmax	25.43	26.73
	Ipmax	6.04	6.31
	Voc	33.08	34.32
	Isc	6.57	6.70



Mechanical Characteristics	
Solar Cells	60 multicrystalline 6 " silicon cells (156mm x156mm) in series
Front Cover	5/32" High Transmission Tempered Glass, 90.7% Transmittance
Encapsulant	EVA
Back Cover	White Polyester
Frame	Clear anodized aluminum, Double walled
Diodes	3 SL1515 (16A) bypass diodes
Junction Box	Tyco Solarlok with bypass diodes, UL 1703 compliant
Output Cables	12 AWG, 1.2 meters long with Standard Cable Coupler
Mechanical Load	Method 41, 45 lbs/ft²
External Dimensions	64.51" x 38.65" x 1.39"; 1638mm x 982 mm x 35 mm
Weight	50 lbs; 22.7 Kg
Fire Rating	Class

For more information, please contact !fl·y9ŘøI·NŘă:
(202) 305-OTHC
I·fl·y@ŜŘøI·NŘăH@usdoj.gov
unicor.gov/solar

All data subject to change without prior notice.