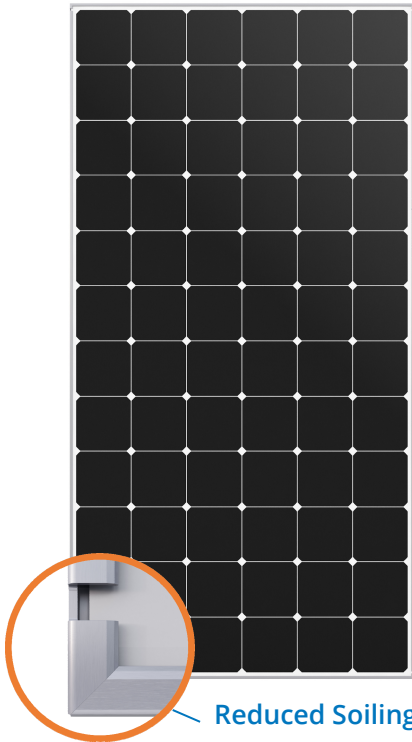




430-450W Commercial A-Series Panels

SunPower® Maxeon® Cell-based Solar Panels

SunPower® Maxeon® cell-based panels maximize energy production and savings by combining industry-leading power, efficiency, and durability with the best warranty available in the market.^{1,2}



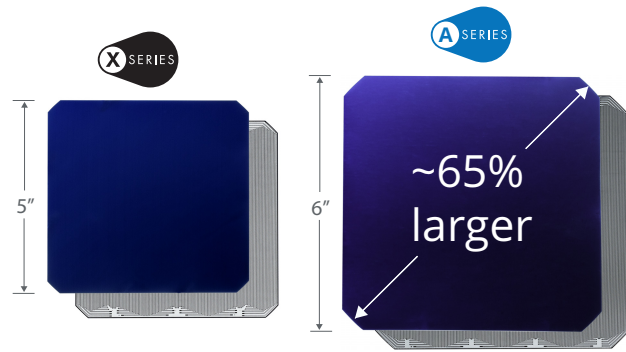
Reduced Soiling

NEW drainage notch improves performance



Highest Power Density Available

SunPower's new Maxeon® Gen 4 cell is 65% larger than prior generations, delivering the most powerful cell and highest efficiency panel in commercial solar. The result is more power per square meter than any commercially available solar.²



SUNPOWER MAXEON SOLAR CELL TECHNOLOGY



Fundamentally Different. And Better.

- Most powerful cell in commercial solar²
- Delivers unmatched reliability³
- Patented solid metal foundation prevents breakage and corrosion

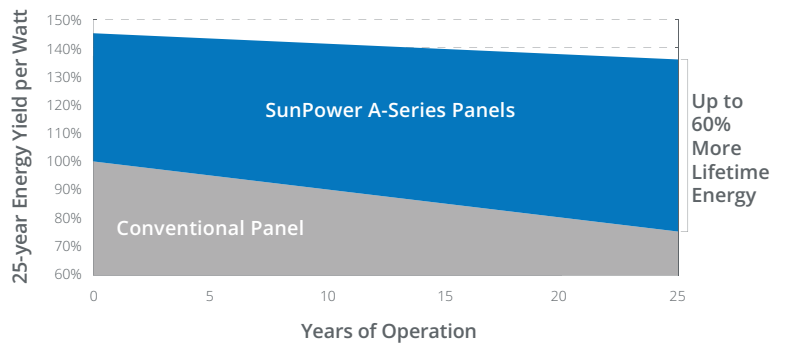
As sustainable as the energy it produces.

- Ranked #1 in Silicon Valley Toxics Coalition 2015 Solar Scorecard⁴
- Contributes to more LEED categories than conventional panels⁵



Highest Lifetime Energy and Savings

Designed to deliver 60% more energy in the same space over 25 years in real-world conditions like partial shade and high temperatures.²



Best Reliability, Best Warranty

SunPower technology is proven to last and we stand behind our panels with the industry's best 25-year Combined Power, Product and Service Warranty.

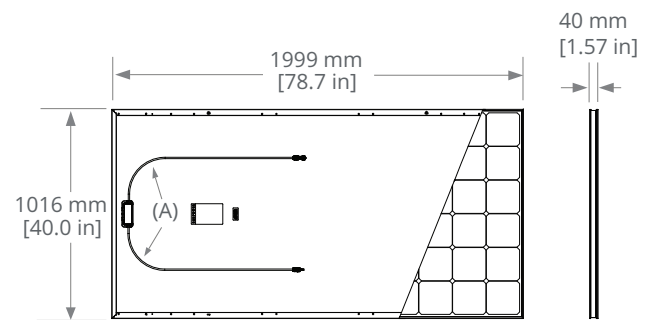


430-450W Commercial A-Series Panels – Preliminary datasheet

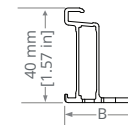
Electrical Data			
	SPR-A450-COM	SPR-A440-COM	SPR-A430-COM
Nominal Power (P _{nom}) ⁶	450 W	440 W	430 W
Power Tolerance	+5/0%	+5/0%	+5/0%
Panel Efficiency	22.2%	21.7%	21.2%
Rated Voltage (V _{mpp})	44.0 V	43.4 V	42.7 V
Rated Current (I _{mpp})	10.2 A	10.2 A	10.1 A
Open-Circuit Voltage (V _{oc})	51.9 V	51.6 V	51.2 V
Short-Circuit Current (I _{sc})	11.0 A	10.9 A	10.9 A
Max. System Voltage	1500 V UL		
Maximum Series Fuse	20 A		
Power Temp Coef.	-0.26% / °C		
Voltage Temp Coef.	-136 mV / °C		
Current Temp Coef.	5.7 mA / °C		

Tests And Certifications - Pending	
Standard Tests	UL1703
Quality Management Certs	ISO 9001:2015, ISO 14001:2015
EHS Compliance	RoHS, OHSAS 18001:2007, lead free, Recycle Scheme, REACH SVHC-163
Sustainability	Cradle to Cradle Certified™ Silver. "Declare." listed.
Ammonia Test	IEC 62716
Desert Test	10.1109/PVSC.2013.6744437
Salt Spray Test	IEC 61701 (maximum severity)
PID Test	1500 V: IEC 62804, PVEL 600 hr duration
Available Listings	UL

Operating Condition And Mechanical Data	
Temperature	-40° F to +185° F (-40° C to +85° C)
Impact Resistance	1 inch (25 mm) diameter hail at 52 mph (23 m/s)
Appearance	Class A
Solar Cells	72 Monocrystalline IBC cells
Tempered Glass	High-transmission tempered anti-reflective
Junction Box	IP-68, MC4 Compatible
Weight	40.5 lbs (18.4 kg)
Max. Load	Wind: 75 psf, 3600 Pa, 367 kg/m ² front & back Snow: 125 psf, 6000 Pa, 612 kg/m ² front
Frame	Class 2 silver anodized



FRAME PROFILE



(A) Cable Length: 1320 mm [52 in]

(B) Long Side: 30 mm [1.2 in]

Short Side: 22 mm [0.9 in]

Please read the safety and installation guide.

1 SunPower 450 W, 22.2% efficient, compared to a Conventional Panel on same-sized arrays (310 W, 16% efficient, approx. 2.0 m²), 4.9% more energy per watt (based on PVsyst pan files for avg US climate), 0.5%/yr slower degradation rate (Jordan, et. al. "Robust PV Degradation Methodology and Application." PVSC 2018).

2 Based on search of datasheet values from websites of top 10 manufacturers per IHS, as of January 2018.

3 #1 rank in "Fraunhofer PV Durability Initiative for Solar Modules: Part 3". PVTech Power Magazine, 2015. Campeau, Z. et al. "SunPower Module Degradation Rate," SunPower white paper, 2013.

4 SunPower is rated #1 on Silicon Valley Toxics Coalition's Solar Scorecard.

5 A-Series panels additionally contribute to LEED Materials and Resources credit categories.

6 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25° C). NREL calibration Standard: SOMS current, LACCS FF and Voltage.

See www.sunpower.com/company for more reference information.

For more details, see extended datasheet: www.sunpower.com/solar-resources. Specifications included in this datasheet are subject to change without notice.

©2018 SunPower Corporation. All rights reserved. SUNPOWER, the SUNPOWER logo, and MAXEON are trademarks or registered trademarks of SunPower Corporation.

SUNPOWER®



PANELCLAW®

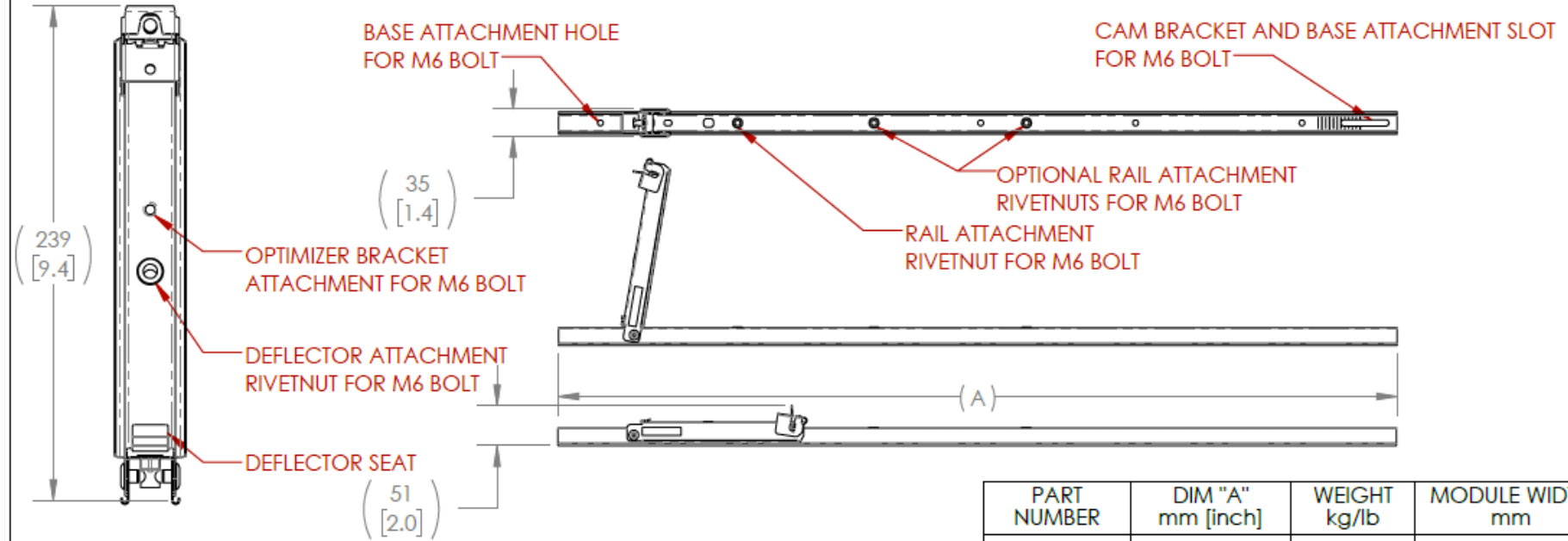
**clawFR 10 Degree 5 Degree and Dual Tilt
Component Cut Sheets**



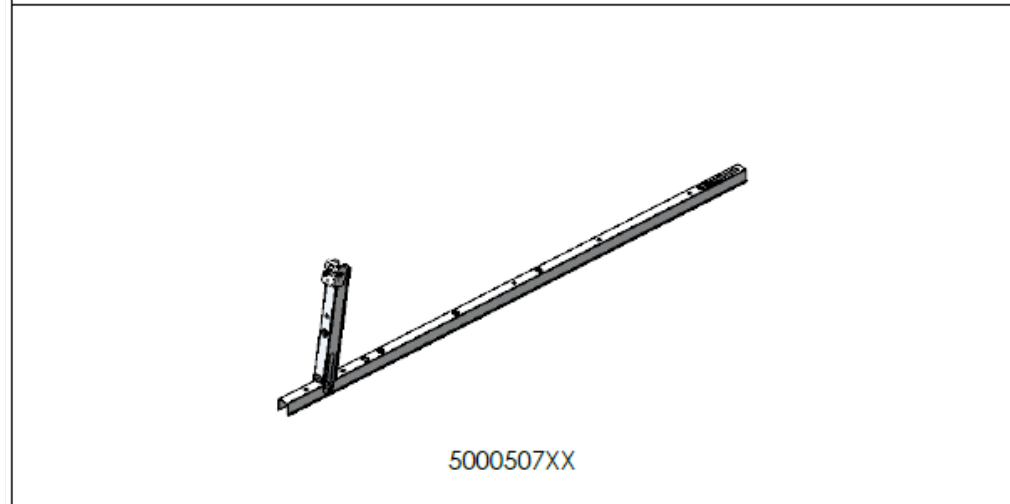
Component Cut Sheet

10 Degree and Dual Tilt "Module Connector"

		REVISION		
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00548	INITIAL RELEASE	21-JAN-19	JA
B	C00619	UPDATED PARTS, UPDATED BALLAST RAIL TO RAIL	29-MAY-20	JA
C	C00650	ADDED -03, -04, -08	13-JAN-21	JA



PART NUMBER	DIM "A" mm [inch]	WEIGHT kg/lb	MODULE WIDTH mm
C500050701	1100.0[43.31]	0.63/1.39	990 - 1030
C500050702	1140.0[44.88]	0.64/1.42	1031 - 1070
C500050703	1180.0[46.46]	0.66/1.46	1071 - 1110
C500050704	1220.0[48.03]	0.68/1.49	1111 - 1150
C500050708	1380.0[54.33]	0.74/1.64	1270 - 1310



PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

MATERIAL
STEEL W/ZAM COATING

DIMENSIONS ARE IN mm [INCHES]


PANELCLAW
1600 Osgood St., Suite 2023
North Andover, MA 01845
Phone: 978.688.4900
Fax: 978.688.5100
www.panelclaw.com

**MODULE CONNECTOR,
10 DEGREE, CFR**

SIZE	DWG. NO.	REV
A	C5000507XX	C

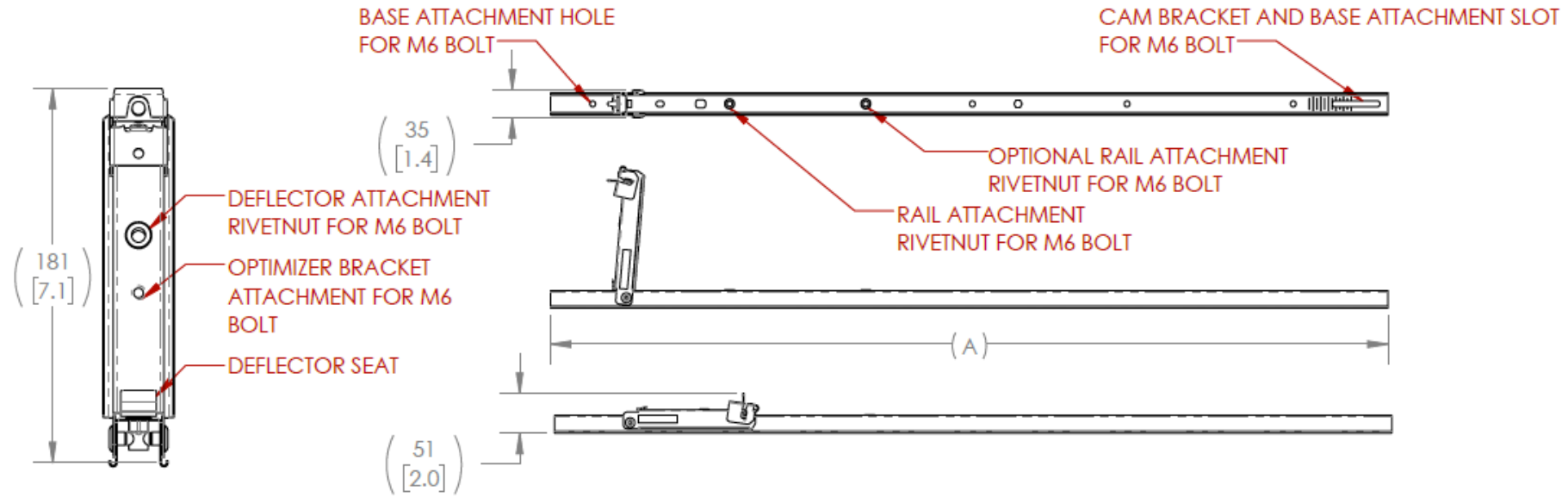
SCALE: NONE WT SEE TABLE kg/lb SHEET 1 OF 1



Component Cut Sheet

5 Degree "Module Connector"

REVISION				
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00583	INITIAL RELEASE	02-JUL-19	JA
B	C00619	PART UPDATED	29-MAY-20	JA
C	C00650	ADDED -03, -04, -08	11-JAN-21	JA



PART NUMBER	DIM "A" mm [inch]	WEIGHT kg/lb	MODULE WIDTH mm
C500052301	1100.0[43.31]	0.59/1.30	990 - 1030
C500052302	1140.0[44.88]	0.61/1.34	1031 - 1070
C500052303	1180.0[46.46]	0.62/1.38	1071 - 1110
C500052304	1220.0[48.03]	0.64/1.41	1111 - 1150
C500052308	1380.0[54.33]	0.71/1.56	1270 - 1310



5000523XX

PROPRIETARY AND CONFIDENTIAL
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

MATERIAL
 STEEL W/ZAM COATING

DIMENSIONS ARE IN mm [INCHES]



PanelClaw, Inc.
 1600 Osgood St., Suite 2023,
 North Andover, MA 01845
 Phone: 978.688.4900
 Fax: 978.688.5100
www.panelclaw.com

PANELCLAW®

MODULE CONNECTOR, 5 DEGREE, CFR

SIZE	DWG. NO.	REV
A	C5000523XX	C

SCALE: NONE

WT SEE TABLE kg/lb

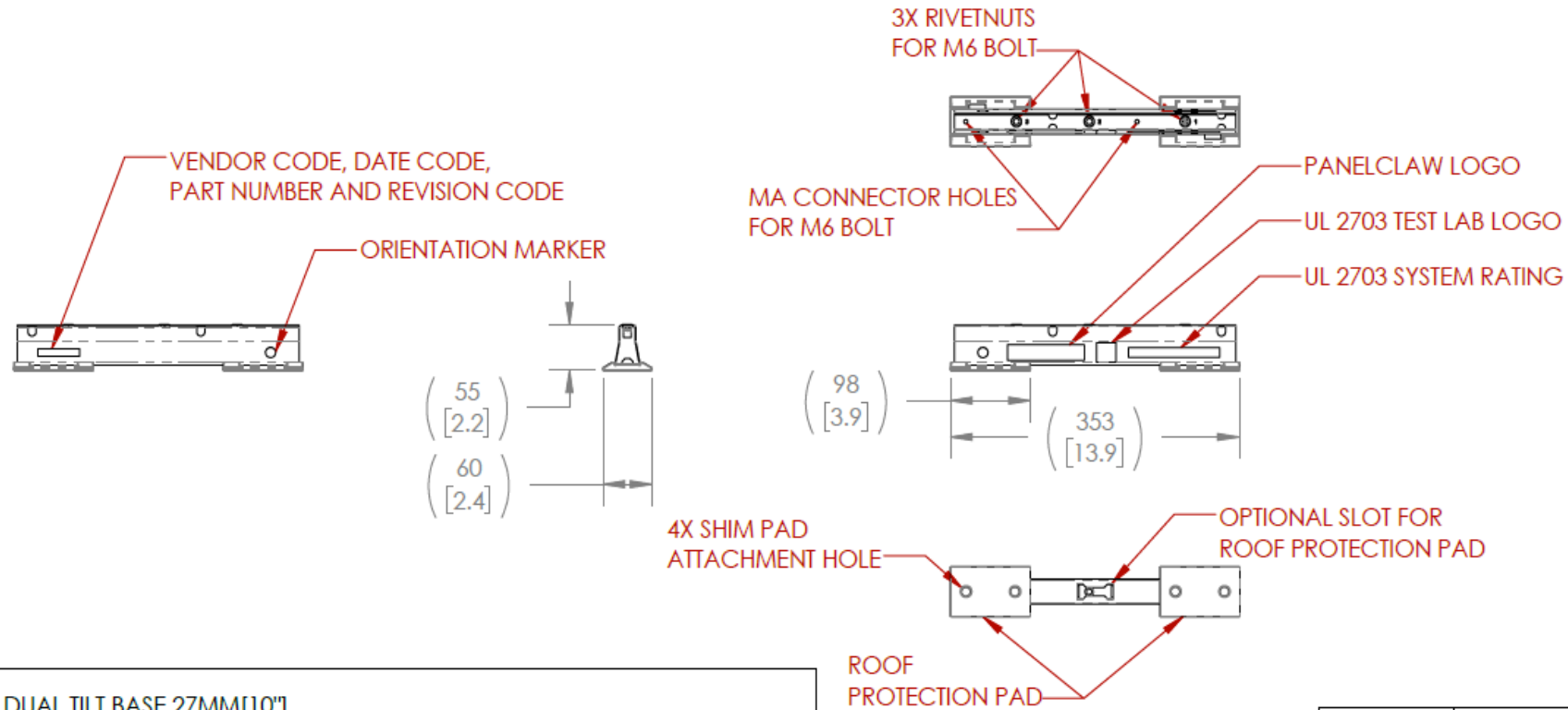
SHEET 1 OF 1



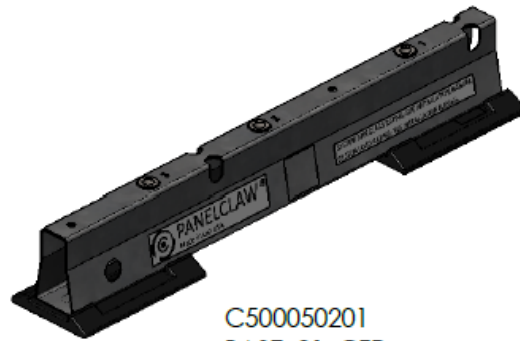
Component Cut Sheet

Dual Tilt "Base"

		REVISION		
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00548	INITIAL RELEASE	21-JAN-19	JA



CLAWFR DUAL TILT BASE 27MM[10"]



C500050201
BASE, 01, CFR

PART NUMBER	WEIGHT kg/lb
500050201	0.37/0.81

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

MATERIAL
STEEL W/ZAM COATING;
TPV (Thermoplastic Vulcanizate)

DIMENSIONS ARE IN mm [INCHES]


PANELCLAW
PanelClaw, Inc.
1600 Osgood St., Suite 2023,
North Andover, MA 01845
Phone: 978.688.4900
Fax: 978.688.5100
www.panelclaw.com

BASE, 01, CFR

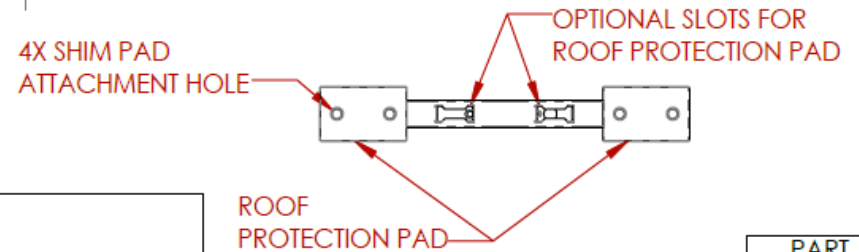
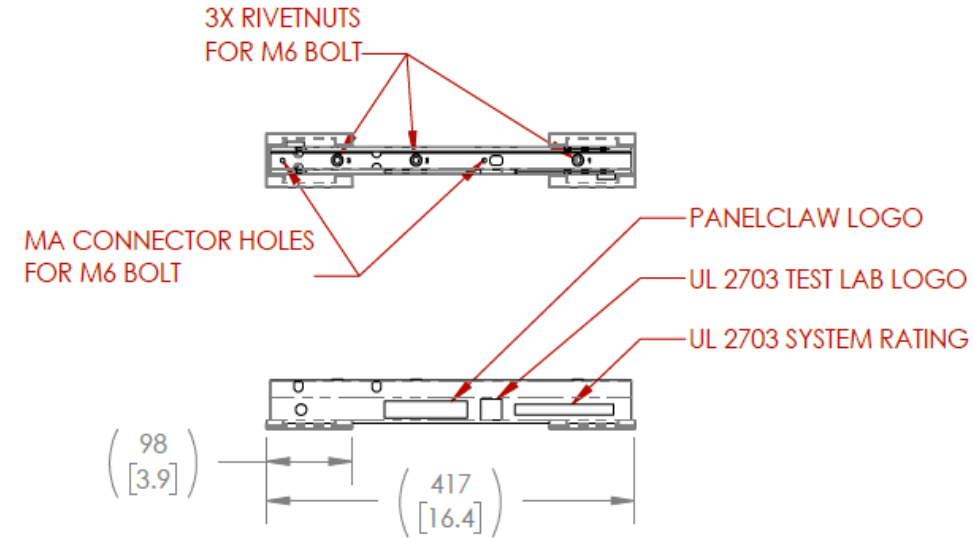
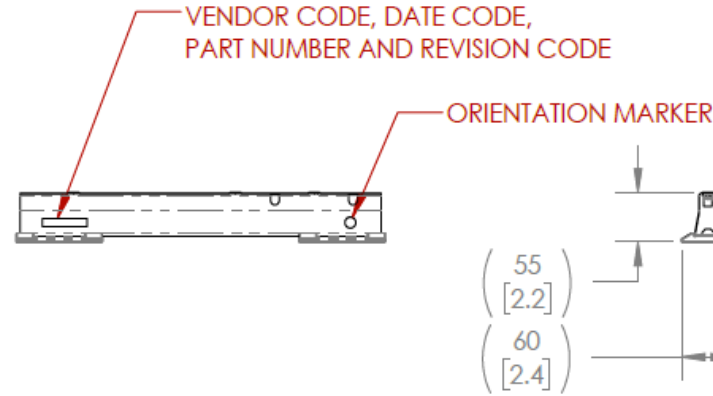
SIZE	DWG. NO.	REV
A	C500050201	A

SCALE	WT	SEE TABLE	kg/lb	SHEET	OF 3
NONE	SEE TABLE	kg/lb		1	OF 3



Component Cut Sheet

5 Degree (all spacing options) and 10 Degree 11.4" row gap spacing option
"Base"



CLAWFR 5 DEGREE BASE 18CM[7"]
 CLAWFR 5 DEGREE BASE 28CM[11"]
 CLAWFR 10 DEGREE BASE 29CM[11"]



C500050202
BASE, 02, CFR

PART NUMBER	WEIGHT kg/lb
500050202	0.42/0.93

PROPRIETARY AND CONFIDENTIAL
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

MATERIAL
 STEEL W/ZAM COATING;
 TPV (Thermoplastic Vulcanizate)

DIMENSIONS ARE IN mm [INCHES]

PanelClaw, Inc.
 1600 Osgood St., Suite 2023,
 North Andover, MA 01845
 Phone: 978.688.4900
 Fax: 978.688.5100
 www.panelclaw.com

BASE, 02, CFR

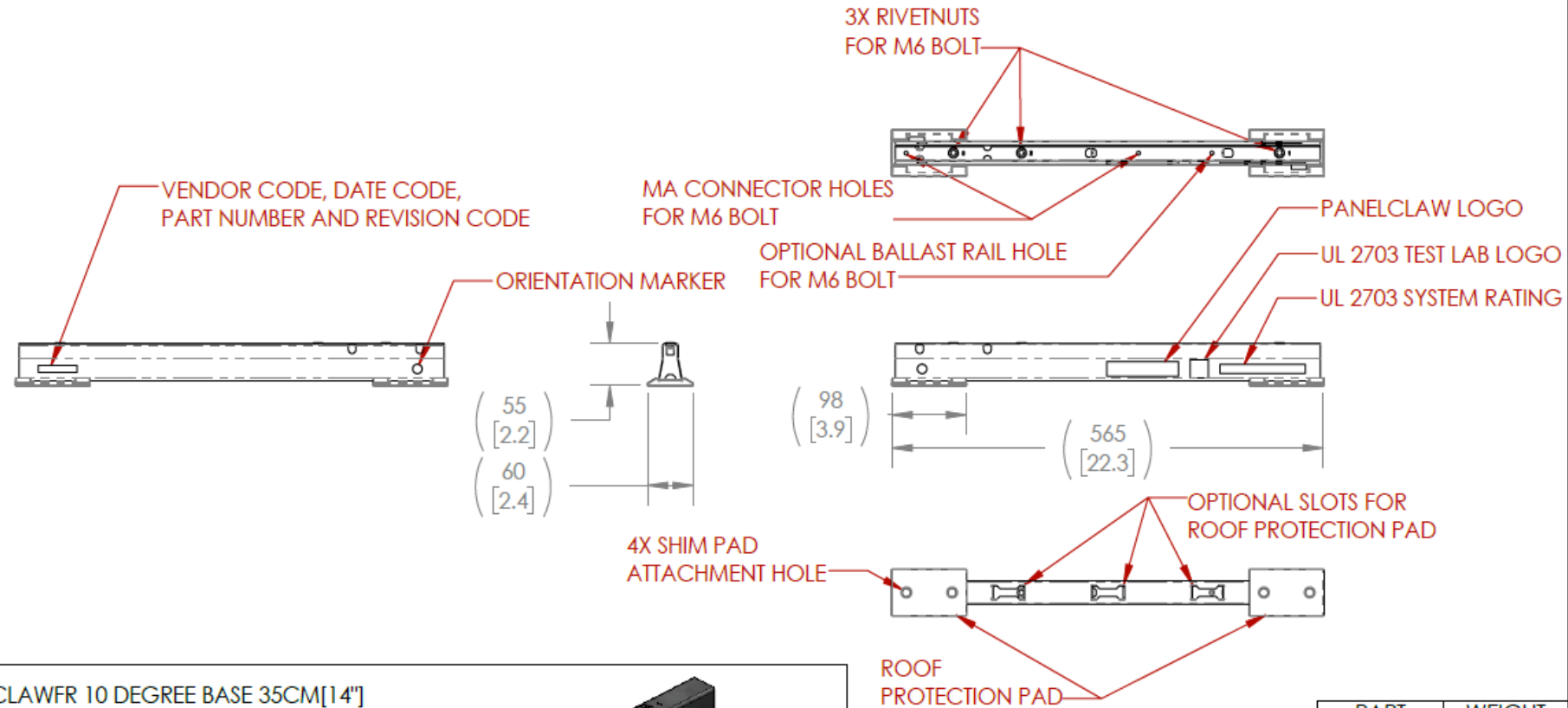
SIZE	DWG. NO.	REV
A	C500050202	A

SCALE: NONE WT: SEE TABLE kg/lb SHEET 2 OF 3



Component Cut Sheet

10 Degree (13.9 and 17.4 row gap spacing options)
"Base"



CLAWFR 10 DEGREE BASE 35CM[14"]
CLAWFR 10 DEGREE BASE 44CM[17"]



C500050203
BASE, 03, CFR

PART NUMBER	WEIGHT kg/lb
500050203	0.55/1.21

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

MATERIAL
STEEL W/ZAM COATING;
TPV (Thermoplastic Vulcanizate)

DIMENSIONS ARE IN mm [INCHES]


PANELCLAW
PanelClaw, Inc.
1600 Osgood St., Suite 2023,
North Andover, MA 01845
Phone: 978.888.4900
Fax: 978.888.5100
www.panelclaw.com

BASE, 03, CFR

SIZE	DWG. NO.	REV
A	C500050203	A

SCALE: NONE

WT SEE TABLE kg/lb

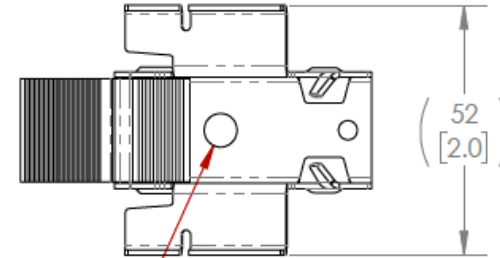
SHEET 3 OF 3



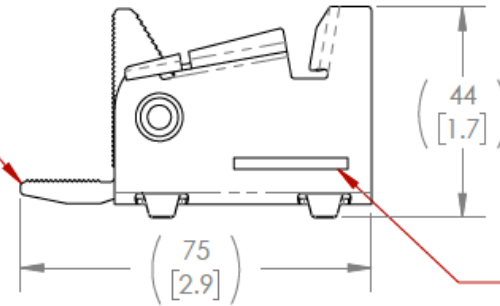
Component Cut Sheet

10 Degree and Dual Tilt "Cam"

		REVISION		
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00548	INITIAL RELEASE	21-JAN-19	JA

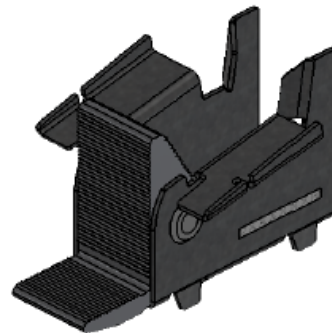


MODULE CONNECTOR AND BASE ATTACHMENT HOLE FOR M6 BOLT



MODULE SEAT

PART NUMBER AND REVISION CODE



PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

MATERIAL
STEEL W/ZAM COATING;
ALUMINUM

DIMENSIONS ARE IN mm [INCHES]

 **PANELCLAW**
1600 Osgood St., Suite 2023,
North Andover, MA 01845
Phone: 978.688.4900
Fax: 978.688.5100
www.panelclaw.com

CAM, 10 DEGREE, CFR

SIZE	DWG. NO.	REV
A	C5000500	A

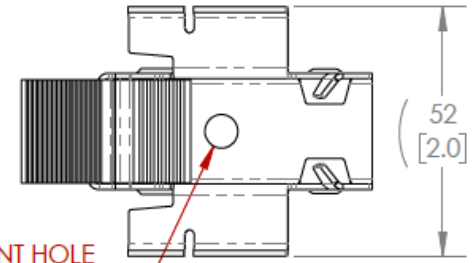
SCALE: NONE	WT 0.08/0.17 kg/lb	SHEET 1 OF 1
-------------	--------------------	--------------



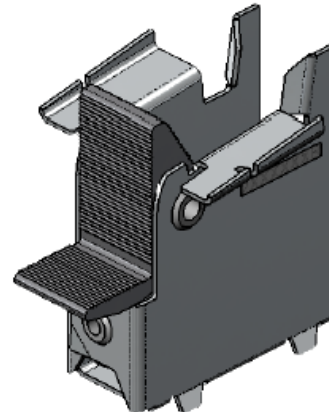
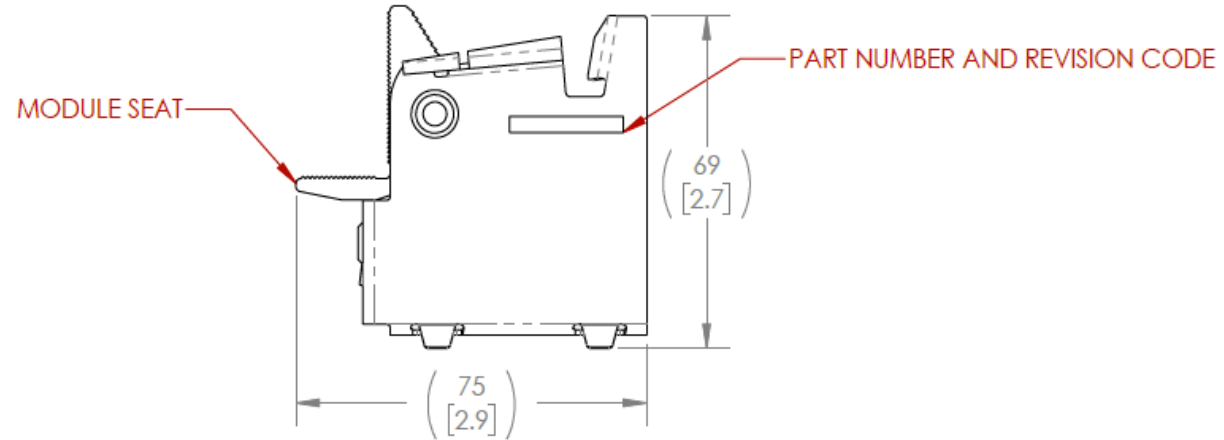
Component Cut Sheet

5 Degree "Cam"

		REVISION		
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00583	INITIAL RELEASE	02-JUL-19	JA



MODULE CONNECTOR AND BASE ATTACHMENT HOLE
FOR M6 BOLT



PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

MATERIAL
STEEL W/ZAM COATING;
ALUMINUM

DIMENSIONS ARE IN mm [INCHES]



PanelClaw, Inc.
1600 Osgood St., Suite 2023,
North Andover, MA 01845
Phone: 978.888.4900
Fax: 978.888.5100
www.panelclaw.com

PANELCLAW

CAM, 5 DEGREE, CFR

SIZE	DWG. NO.	REV
A	C5000515	A

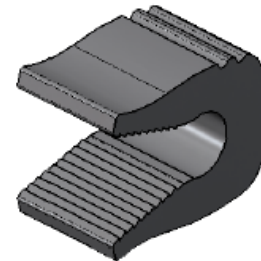
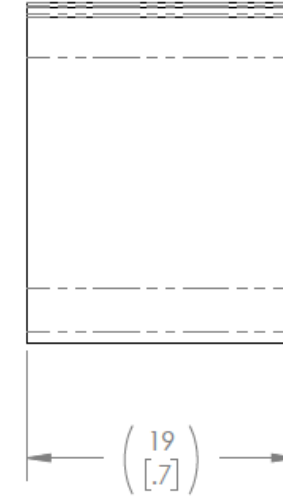
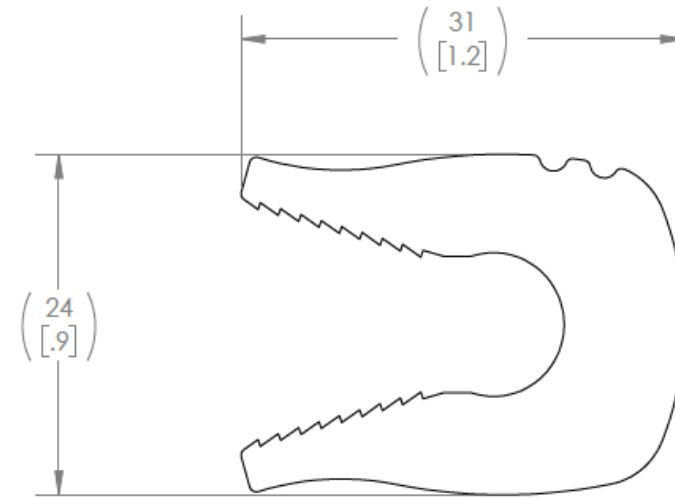
SCALE: NONE WT: 0.11/0.24 kg/lb SHEET 1 OF 1



Component Cut Sheet

“Claw”

		REVISION		
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00548	INITIAL RELEASE	21-JAN-19	JA



PROPRIETARY AND CONFIDENTIAL
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.


PANELCLAW
 PanelClaw, Inc.
 1600 Osgood St., Suite 2023,
 North Andover, MA 01845
 Phone: 978.888.4900
 Fax: 978.888.5100
 www.panelclaw.com

MATERIAL
 ALUMINUM

CAM CLAW, CFR

SIZE	DWG. NO.	REV
A	C2000673	A

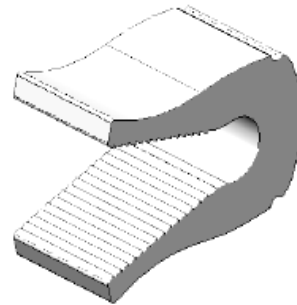
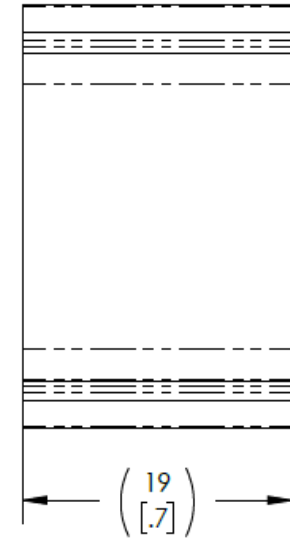
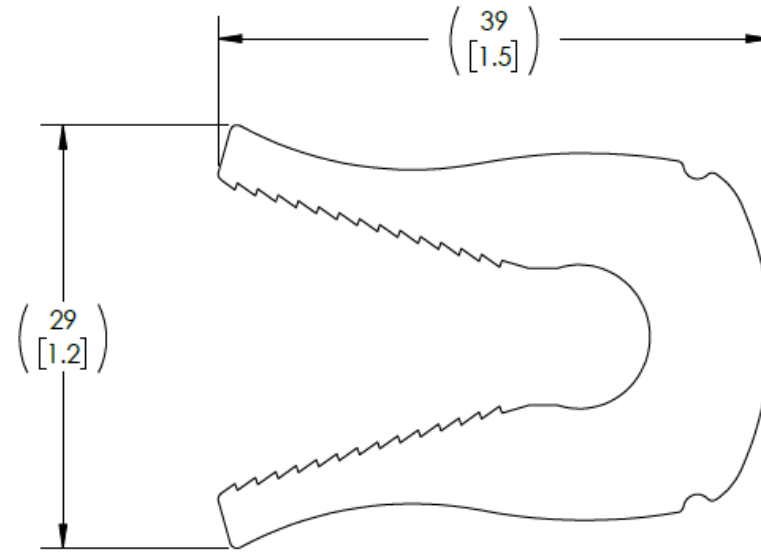


Component Cut Sheet

“Claw, CS”

For use with modules that have smaller flanges.

		REVISION		
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00629	INITIAL RELEASE	14-SEP-20	JA



PROPRIETARY AND CONFIDENTIAL
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

MATERIAL
 ALUMINUM

DIMENSIONS ARE IN mm [INCHES]

PanelClaw, Inc.
 1600 Osgood St., Suite 2023,
 North Andover, MA 01845
 Phone: 978.688.4900
 Fax: 978.688.5100
www.panelclaw.com

PANELCLAW®

CAM CLAW, CS, CFR

SIZE	DWG. NO.	REV
A	C2000815	A

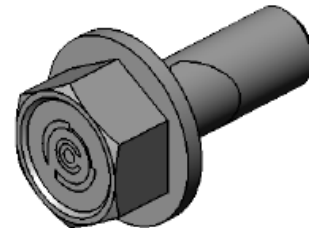
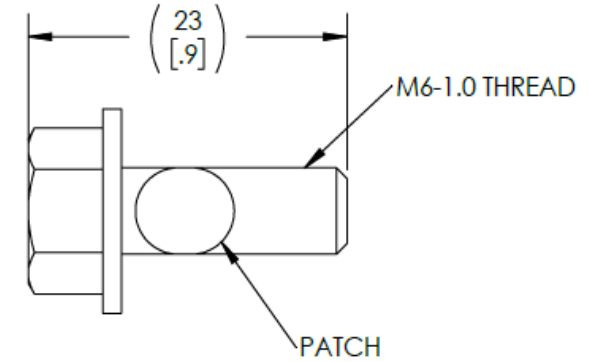
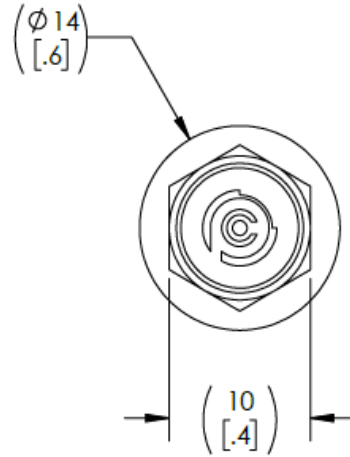
SCALE: NONE WT 0.03/0.06 kg/lb SHEET 1 OF 1



Component Cut Sheet

"M6X16 Bolt"

		REVISION		
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00629	INITIAL RELEASED	14-SEP-20	JA



PROPRIETARY AND CONFIDENTIAL
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

MATERIAL
 STEEL

 PanelClaw, Inc.
 1600 Osgood St., Suite 2023,
 North Andover, MA 01845
 Phone: 978.688.4900
 Fax: 978.688.5100
www.panelclaw.com

PANELCLAW®

BLT, HEX FLG, TRI, M6X16, ST, PATCH

SIZE	DWG. NO.	REV
A	C2000697	A



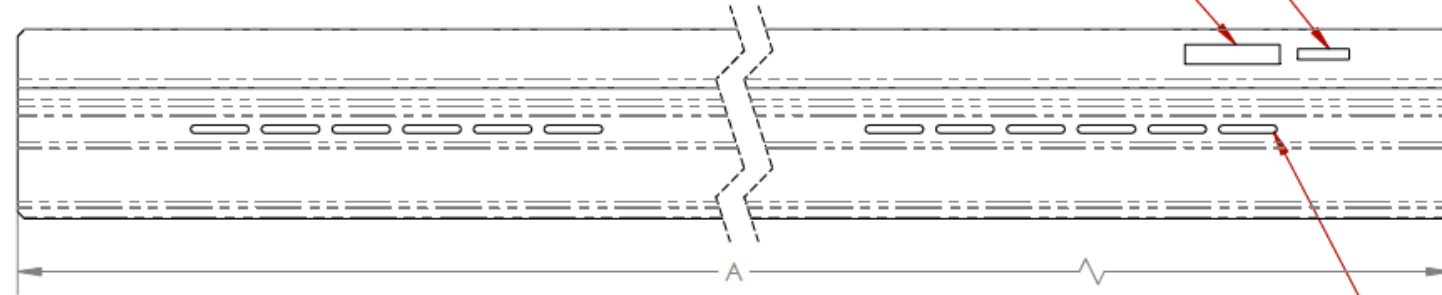
Component Cut Sheet

10 Degree "Deflector"

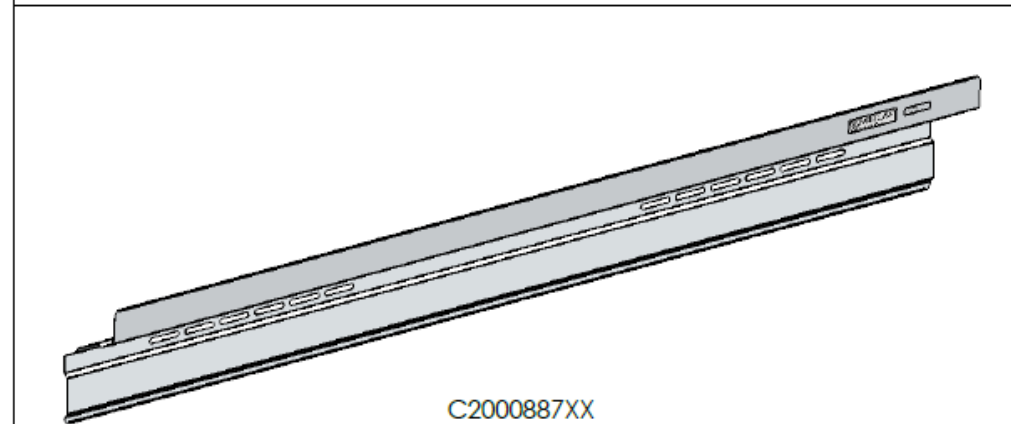
		REVISION		
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00604	INITIAL RELEASE	07-FEB-20	JA
B	C00629	UPDATED ISO VIEWS	14-SEP-20	JA
C	C00635	ADDED -05, -06, -07	19-APR-21	JA

VENDOR CODE, DATE CODE, PART NUMBER, AND REVISION CODE

PANELCLAW LOGO



12X SLOT
FOR M6 BOLT



PART NUMBER	DIM "A" mm [in]	WEIGHT kg/lb
C200088701	1732[68.2]	1.38/3.03
C200088702	2056[81.0]	1.64/3.61
C200088703	2132[83.9]	1.70/3.74
C200088704	2232[87.9]	1.78/3.92
C200088705	2332[91.8]	1.84/4.10
C200088706	2432[95.8]	1.94/4.28
C200088707	2532[99.7]	2.02/4.46

PROPRIETARY AND CONFIDENTIAL
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

MATERIAL
 STEEL W/ ZAM COATING

 PanelClaw, Inc.
 1600 Osgood St., Suite 2023,
 North Andover, MA 01845
 Phone: 978.688.4900
 Fax: 978.688.5100
 www.panelclaw.com

PANELCLAW
DEFLECTOR, 10D, CFR

SIZE	DWG. NO.	REV
A	C2000887XX	C

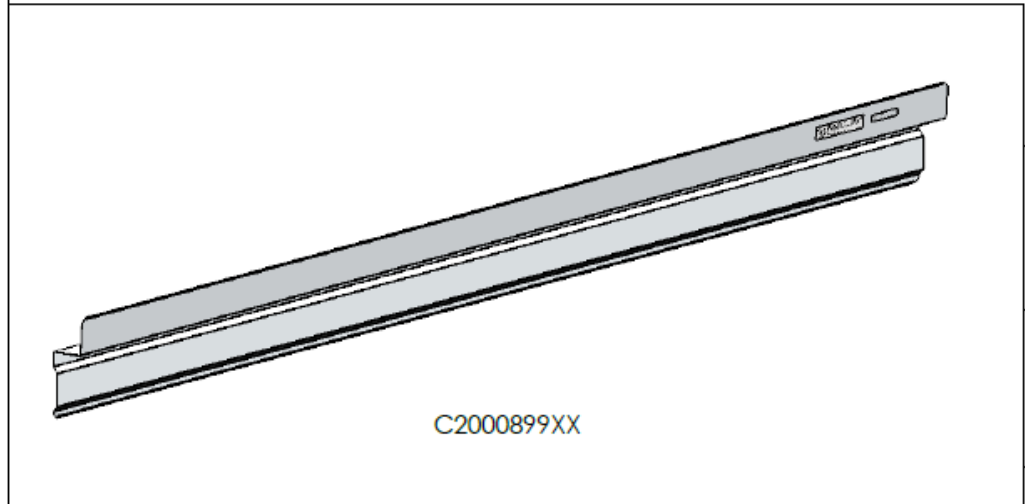
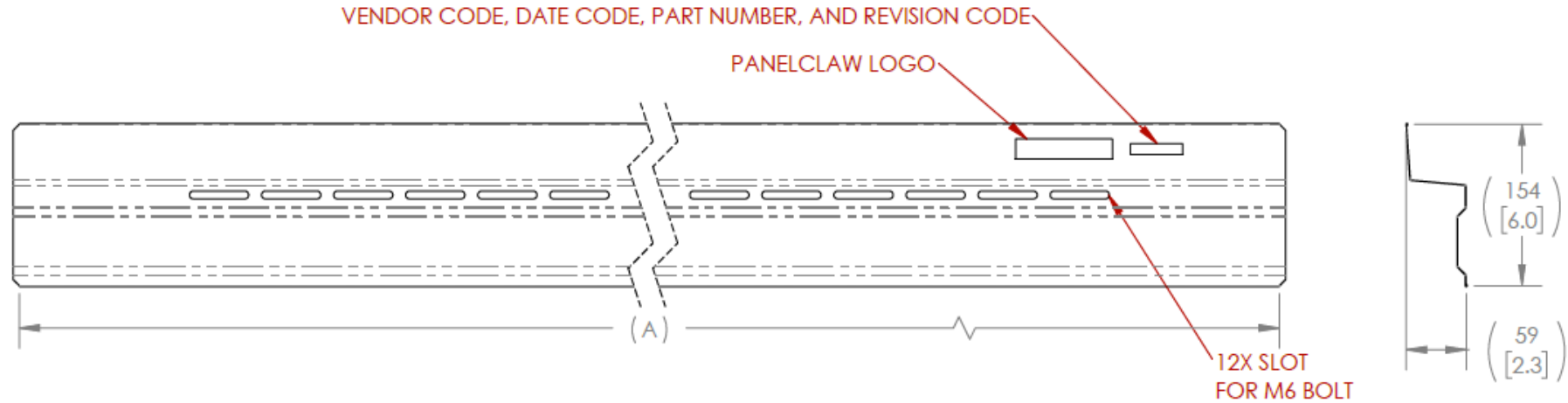
DIMENSIONS ARE IN mm [INCHES] SCALE: NONE WT: SEE TABLE kg/lb SHEET 1 OF 1



Component Cut Sheet

5 Degree "Deflector"

REVISION				
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00604	INITIAL RELEASE	07-FEB-20	JA
B	C00635	ADDED -05, -06, -07	19-APR-21	JA



PART NUMBER	DIM "A" mm [inch]	WEIGHT kg/lb
C200089901	1732[68.2]	1.11/2.44
C200089902	2056[81.0]	1.34/2.96
C200089903	2132[83.9]	1.37/3.02
C200089904	2232[87.9]	1.43/3.16
C200089905	2332[91.8]	1.50/3.31
C200089906	2432[95.7]	1.57/3.45
C200089907	2532[99.7]	1.63/3.60

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

MATERIAL
STEEL W/ ZAM COATING

DIMENSIONS ARE IN mm [INCHES]

PANELCLAW
DEFLECTOR, 5D, CFR

PanelClaw, Inc.
1800 Osgood St., Suite 2023
North Andover, MA 01845
Phone: 978.688.4900
Fax: 978.688.5100
www.panelclaw.com

SIZE	DWG. NO.	REV
A	C2000899XX	B

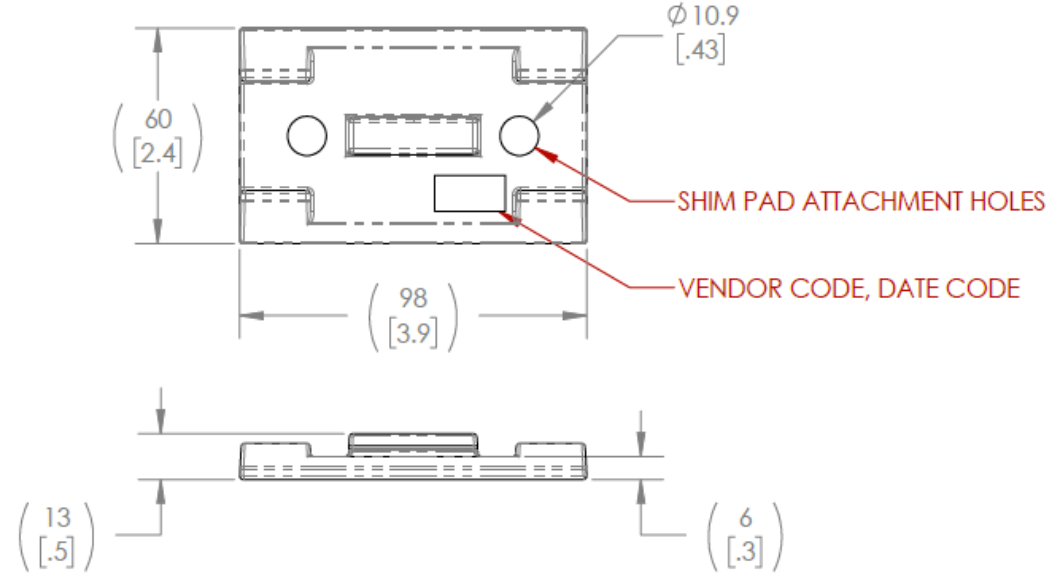
SCALE: NONE WT: SEE TABLE kg/lb SHEET 1 OF 1



Component Cut Sheet

Universal "Roof Protection Pad"

		REVISION		
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00548	INITIAL RELEASE	21-JAN-19	JA



PROPRIETARY AND CONFIDENTIAL
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

MATERIAL
 TPV (Thermoplastic Vulcanizate)

DIMENSIONS ARE IN mm [INCHES]



PanelClaw, Inc.
 1600 Osgood St., Suite 2023,
 North Andover, MA 01845
 Phone: 978.888.4900
 Fax: 978.888.5100
 www.panelclaw.com

PANELCLAW

**ROOF PROTECTION PAD,
 BASE, CFR**

SIZE	DWG. NO.	REV
A	C2000678	A

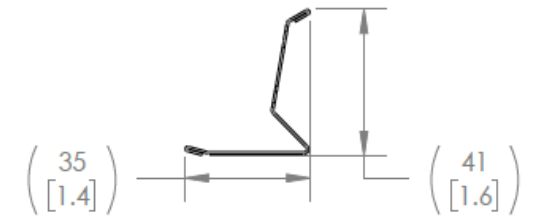
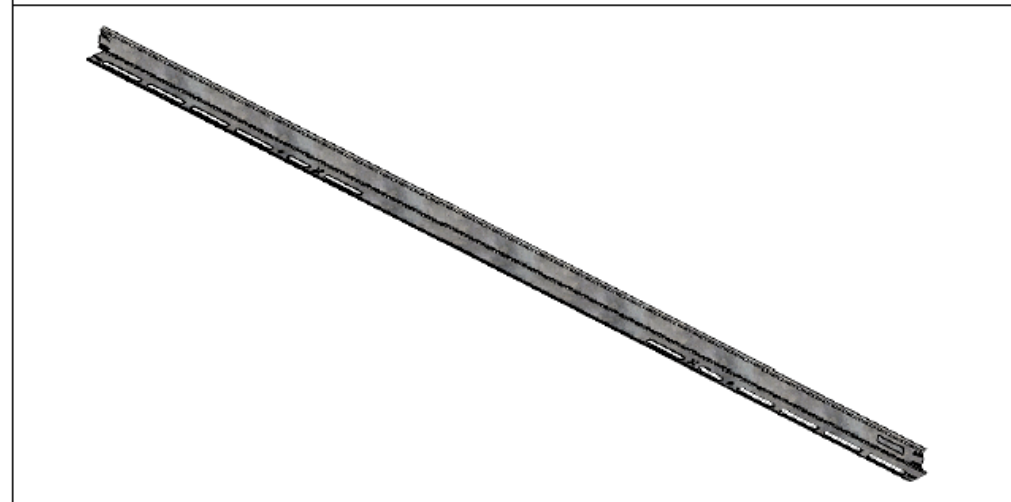
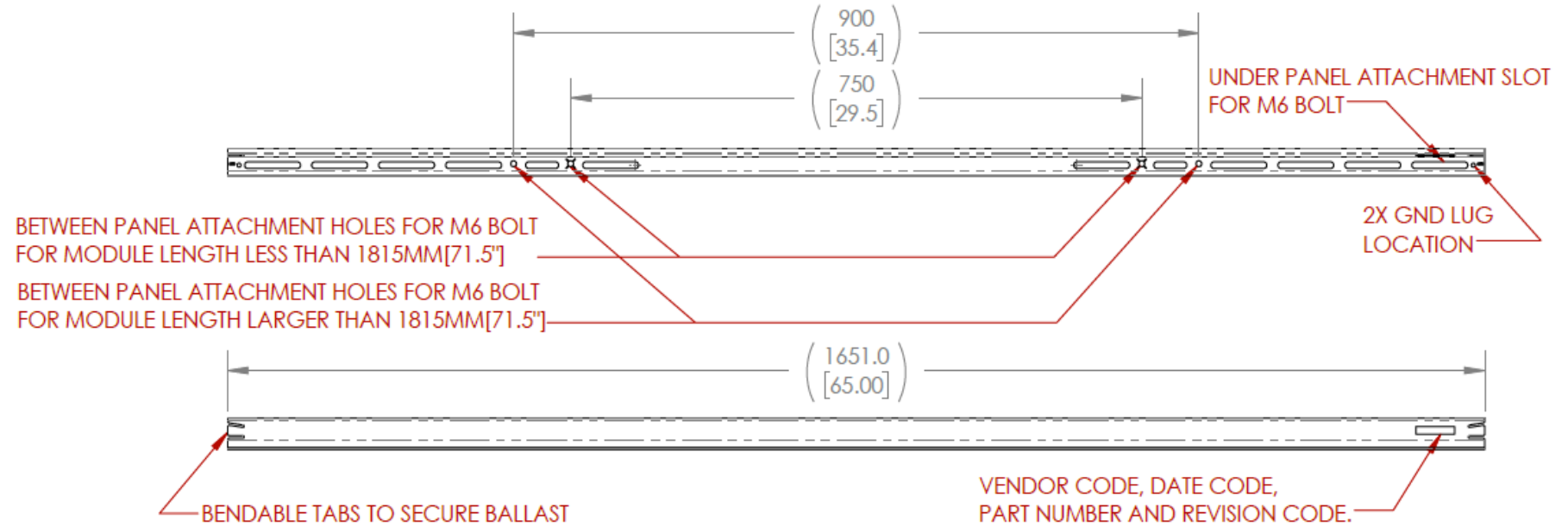
SCALE: NONE	WT 0.04/0.08 kg/lb	SHEET 1 OF 1
-------------	--------------------	--------------



Component Cut Sheet

Universal "Rail"

REVISION				
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00548	INITIAL RELEASE	21-JAN-19	JA
B	C00575	UPDATED PART NAME	15-JUL-19	JA



PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.

PANELCLAW
PanelClaw, Inc.
1800 Osgood St., Suite 2023,
North Andover, MA 01845
Phone: 978.888.4800
Fax: 978.888.5100
www.panelclaw.com

MATERIAL
STEEL W/ZAM COATING

RAIL, CFR

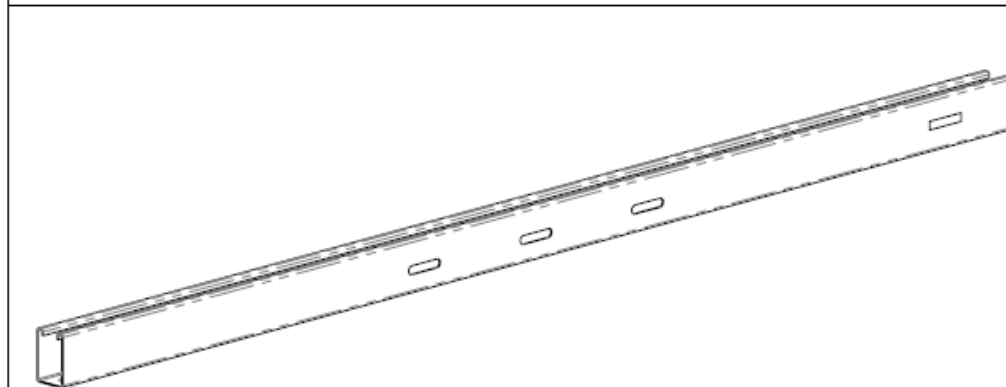
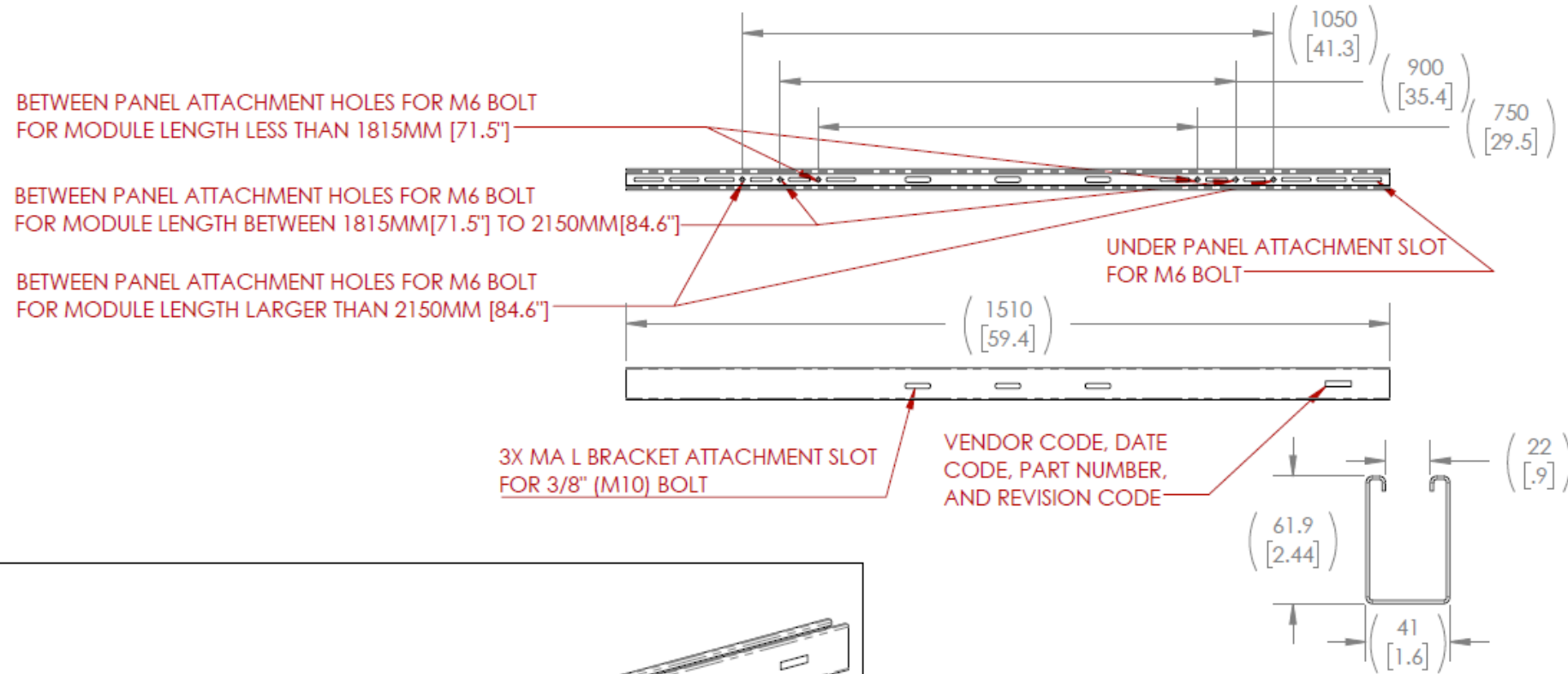
SIZE A	DWG. NO. C2000695	REV B
------------------	-----------------------------	-----------------




Component Cut Sheet

Universal "MA Strut"

		REVISION		
REV.	ECO#	DESCRIPTION	DATE	APPROVED
A	C00650	INITIAL RELEASE	10-MAY-21	JA



PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PANELCLAW. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PANELCLAW IS PROHIBITED.		 PANELCLAW MA STRUT, 2500, CFR PanelClaw, Inc. 1600 Osgood St., Suite 2023, North Andover, MA 01845 Phone: 978.688.4900 Fax: 978.688.5100 www.panelclaw.com	
MATERIAL STEEL W/ ZAM COATING	SIZE A	DWG. NO. C2000930	REV A
DIMENSIONS ARE IN mm [INCHES]	SCALE: NONE	WT 3.21/7.07 kg/lb	SHEET 1 OF 1



For Questions or Feedback Contact sales@panelclaw.com

Simplified Deployment

While a streamlined system design path is prized in the office, time spent in the field on rooftops and job sites is frequently where project budgets fall apart. The DPI's design engineers kept this front-of-mind with the following value-adds.

- Electricians understand the language of AC electrical. Eliminating the need for specialized DC training and skills means more contractors will confidently quote and install a DPI AC-based system.
- DPI's four-port design enables installation up to 300% faster than other module level panel electronics (MLPE) and reducing the number of devices on the roof by at least 50%.
- AC balance-of-system (BOS) parts are universally available, enabling a quick run to the neighborhood electrical shop vs. waiting on shipping from a far-away solar distributor. Fewer installation errors associated with rooftop cable crimping and other points of DC failure.
- Microinverters eliminate labor-intensive string-inverter racking and mounting costs.
- Design changes in the field are simple as opposed to complex DC string systems.
- At less than 13 pounds per unit, no heavy moving equipment is required as compared with heavy string inverter placement and installation.

Maximized Performance

PV system performance equates faster payback times, which equates increased return on investment and ultimately customer satisfaction. In other words, system performance is where the rubber meets the road.

- With module-level maximum power point tracking (MPPT), each module's output is generated independently, and is unaffected by shading, module mismatch or output loss in a neighboring module.
- Microinverters add value by powering up earlier in the day and shutting down later in the day than string inverter optimizers, expanding the production curve.
- The more complex the roof's module layout, the stronger DPI's value proposition becomes based on yield per square foot.
- Yotta's 25-year extended warranty more than doubles the typical string inverter warranty (10 years).



Reliable & Easy to Maintain

The days of sending technicians to chase an elusive ground fault or error on a string system are a headache of the past. Enter the zero maintenance four-port microinverter with industry leading diagnostics.

- Module-level monitoring improves system reliability, long-term yield and makes troubleshooting a breeze.
- Microinverters eliminate the single point of failure risk inherent in string inverters. String inverter failures require immediate attention given that they have significant impact to system performance. Module-level failures are mere service calls with minimal production loss.
- Four-port design translates to as much as 50% fewer required units per system compared with other microinverter technologies.
- DPI's offers reliability superior to that of string inverters paired with optimizers or RSD devices.
- When required, a section of the array can be electrically isolated for maintenance, compared with string inverter systems. No heavy equipment to lift or replace.

Future-Proof

Whether it's utilities ending Net Energy Metering (NEM), implementing Time-Of-Use (TOU) tariffs or markets opening up via demand response programs, the pairing of energy storage with solar will become the norm. Whether it makes economic sense today, or will tomorrow, Yotta DPI future-proofs your solar installation so that you can retrofit energy storage seamlessly at any point in the future.

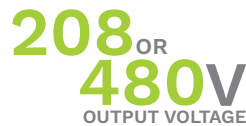
- Optimized for integration with Yotta's SolarLEAF energy storage technology anywhere in the array. The DPI system is inherently storage-ready without requiring any additional complex electrical infrastructure. The SolarLEAF can be simply installed between the solar module and the DPI by disconnecting the MC4 connectors and then reconnecting them to the SolarLEAF. Simple!
- No modification to the AC system is required.

www.yottaenergy.com

YOTTA ENERGY INC.
2101 E. Saint Elmo Road, Suite 150
Austin, TX 78744
+1 (512) 856 7788

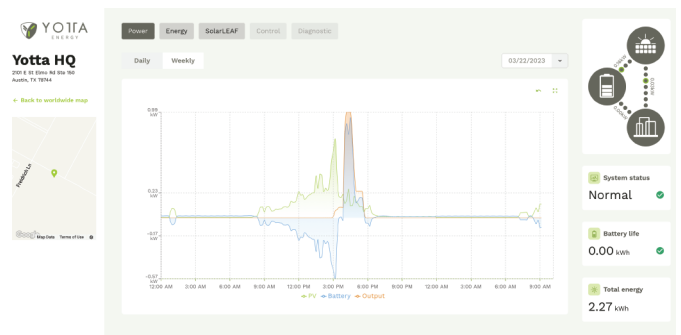
Yotta's **Dual Power Inverters (DPI-208 and DPI-480)** are native 3-phase microinverters that each support **four high capacity solar modules** and deliver outstanding **performance**. The internals are protected with silicone to **reduce stress** on the electronics, increase its **waterproof** properties, **dissipate heat**, and to provide **maximum system reliability**. Yotta's DPI-208 and DPI-480 are powerful **plug-and-play** MLPE inverters that install faster than any other solution in the market and comply with **rapid shutdown requirements**. Their design improves **thermal dissipation** while maximizing **power production**.

- DPI (Dual Power Inverter) designed to work with PV or Yotta's SolarLEAF energy storage technology
- Native 3-phase power output (208V or 480V)
- Low Voltage DC input (<60V)
- 4 Solar Module Input Channels, 2 MPPT's
- Continuous rated AC output power 1728VA @208V and 1800VA @480V
- Engineered for high-capacity PV modules
- Maximum input current 20A
- Integrated Safety Protection Relay
- Rapid Shutdown Compliant
- Adjustable Power Factor




Yotta Vision Monitoring

- **Monitors and Analyzes** each solar module and microinverter
- Allows **Remote Access** to the solar array
- Displays **Performance Issues** and **Alerts** the user to events
- **Real Time Communication**
- **Graphs** system solar output over time to boost troubleshooting




DPI-208 & DPI-480 3-Phase Microinverter Data Sheet

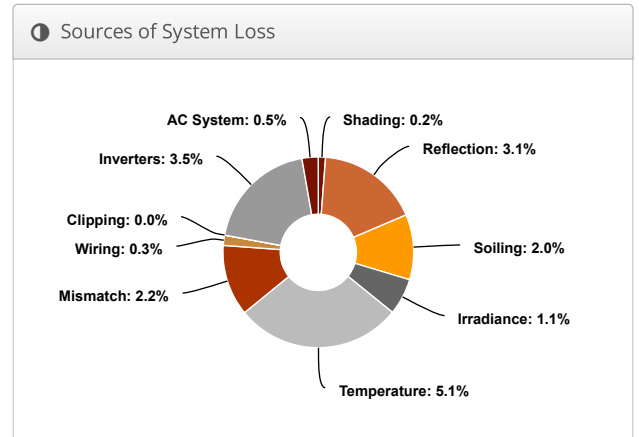
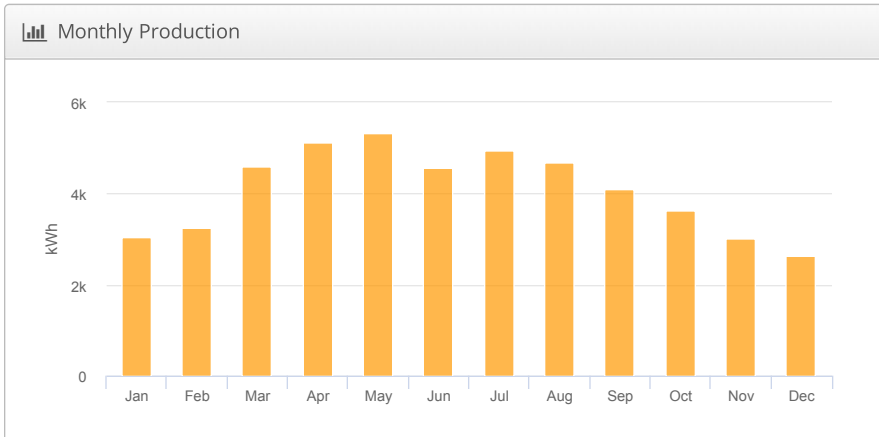
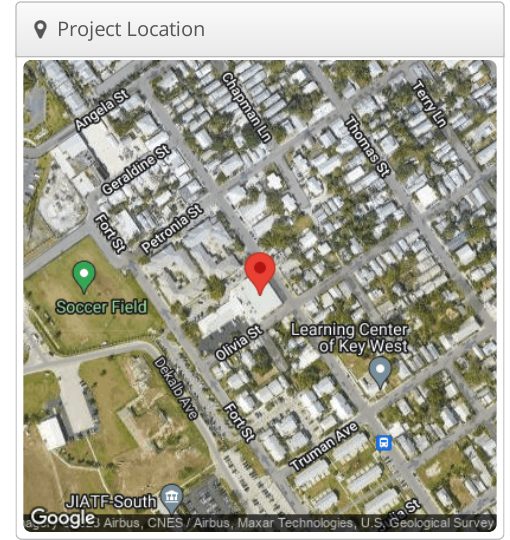
MODEL	DPI-208	DPI-480
INPUT DATA (DC)		
Peak Power Tracking Voltage	32V-45V	
Operating Voltage Range	26V-60V	
Maximum Input Voltage	60V	
Maximum Input Current	20A x 4	
Maximum Input Short Circuit Current	25A per input	
OUTPUT DATA (AC)		
Maximum Continuous Output Power	1728VA	1800VA
Nominal Output Voltage/Range ⁽¹⁾	208V/183V-229V	480V/422V-528V
Adjustable Output Voltage Range	166V-240V	385V-552V
Nominal Output Current	4.8Ax3	2.17Ax3
Maximum Output Fault Current (AC) and Duration	L-L:85.4Apk, 13.6ms of duration, 4.967Arms	L-L:35.1Apk, 13.9ms of duration, 2.199Arms
Grid Connections	208V 3-Phase (208Y/120V, 240 Delta, 240 Delta High Leg)	480V 3-Phase (480Y/277V, 480 Delta)
Nominal Output Frequency/Range ⁽¹⁾	60Hz/59.3Hz-60.5Hz	
Adjustable Output Frequency Range	55Hz-65Hz	
Power Factor	0.99/0.8 leading...0.8 lagging	
Maximum Units per 30A branch ⁽²⁾	5	11
AC Bus Cable	AWG 10	
EFFICIENCY		
Peak Efficiency	96.5%	
Nominal MPPT Efficiency	99.5%	
Night Power Consumption	40mW	
MECHANICAL DATA		
Operating Ambient Temperature Range ⁽³⁾	-40°F to +149°F(-40°C to +65°C)	
Storage Temperature Range	-40°F to +185°F(-40°C to +85°C)	
Dimensions (W x H x D)	14" x 9.5" x 1.8" (359mm X 242mm X 46mm)	
Weight	13 lbs (6kg)	
DC Connector Type	Stäubli MC4 PV-ADBP4-S2&ADSP4-S2	
Cooling	Natural Convection - No Fans	
Enclosure Environmental Rating	Type 6	
FEATURES		
Communication (Inverter To ECU) ⁽⁴⁾	Encrypted ZigBee	
Isolation Design	High Frequency Transformers, Galvanically Isolated	
Energy Management	Yotta EMA (Web and App)	
Warranty	10 Years Standard ; 25 Years Optional	
CERTIFICATE & COMPLIANCE		
Safety, EMC & Grid Compliances	UL-1741; CA Rule 21 (UL 1741 SA and UL 1741 SB); CSA C22.2 No. 107.1-16; FCC Part 15; ANSI C63.4; ICES-003; IEEE1547; NEC2014 & NEC2017 Section 690.11 DC Arc-Fault circuit; Protection NEC2014 & NEC2017 & NEC2020 Section 690.12 Rapid Shutdown of PV systems on Building	
 Meets the standard requirements for Distributed Energy Resources (UL-1741) and identified with the CSA Listed Mark		

(1) Nominal voltage/frequency range can be extended beyond nominal if required by the utility.
 (2) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.
 (3) Inverter may enter low power mode in environments with poor ventilation or limited heat dissipation
 (4) Recommend no more than 80 inverters register to one ECU for stable communication. "

PC Dual - A440 Top Roof(SW) Douglas Comm Center, 111 OLIVIA STREET, KEY WEST, FL,

Report	
Project Name	Douglas Comm Center
Project Address	111 OLIVIA STREET, KEY WEST, FL,
Prepared By	Bob Williams bobw@saltservice.net
	

System Metrics	
Design	PC Dual - A440 Top Roof(SW)
Module DC Nameplate	28.2 kW
Inverter AC Nameplate	30.0 kW Load Ratio: 0.94
Annual Production	48.91 MWh
Performance Ratio	85.4%
kWh/kWp	1,736.9
Weather Dataset	TMY, 10km Grid (24.55,-81.85), NREL (prospector)
Simulator Version	34dd91d93f-2d85c5c137-1646ec5f5a-c726c14e3e



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	2,047.1	
	POA Irradiance	2,034.4	-0.6%
	Shaded Irradiance	2,029.9	-0.2%
	Irradiance after Reflection	1,966.0	-3.1%
	Irradiance after Soiling	1,926.7	-2.0%
	Total Collector Irradiance	1,926.7	0.0%
Energy (kWh)	Nameplate	55,680.3	
	Output at Irradiance Levels	55,057.2	-1.1%
	Output at Cell Temperature Derate	52,239.4	-5.1%
	Output After Mismatch	51,099.7	-2.2%
	Optimal DC Output	50,938.9	-0.3%
	Constrained DC Output	50,938.9	0.0%
	Inverter Output	49,156.1	-3.5%
	Energy to Grid	48,910.3	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		25.5 °C
	Avg. Operating Cell Temp		35.1 °C
Simulation Metrics			
	Operating Hours		4660
	Solved Hours		4660

☁ Condition Set												
Description	Condition Set 2											
Weather Dataset	TMY, 10km Grid (24.55,-81.85), NREL (prospector)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack Type	a	b	Temperature Delta								
	Fixed Tilt	-3.56	-0.075	3°C								
	Flush Mount	-2.81	-0.0455	0°C								
	East-West	-3.56	-0.075	3°C								
	Carport	-3.56	-0.075	3°C								
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	2	2	2	2	2	2	2	2	2	2	2	2
Irradiation Variance	5%											
Cell Temperature Spread	4° C											
Module Binning Range	0% to 5%											
AC System Derate	0.50%											
Module Characterizations	Module	Uploaded By	Characterization									
	SPR-A440-COM (SunPower)	HelioScope	Sunpower_SPR_A440_COM_Preliminary.PAN, PAN									
Component Characterizations	Device	Uploaded By	Characterization									
	30K-3P-208V-N (Sol-Ark)	HelioScope	Spec Sheet									

📦 Components		
Component	Name	Count
Inverters	30K-3P-208V-N (Sol-Ark)	1 (30.0 kW)
Strings	10 AWG (Copper)	8 (550.0 ft)
Module	SunPower, SPR-A440-COM (440W)	64 (28.2 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	8-8	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	East-West	Landscape (Horizontal)	10°	236.2591°	0.2 ft	1x1	32	64	28.2 kW

Detailed Layout

