



ThermoLite[®] Solar Panels for Bus

The perfect solution for preventing costly battery issues.





REDUCE COSTLY DOWNTIME AND SUPPORT SUSTAINABILITY PLANS WITH A SOLAR CHARGING SYSTEM.



ThermoLite® solar panels can deliver clean, reliable performance in a wide variety of applications, resulting in longer battery life, decreased waste, lower fuel consumption and reduced emissions. Given these potential benefits, ThermoLite solar panels can be an important part of a comprehensive sustainability program for your business. New products like the ThermoLite solar panels are a key part of Ingersoll Rand’s plan to significantly increase energy efficiency and reduce climate impact.

THERMOLITE BENEFITS INCLUDE:

- Greatly extends battery life and prevents costly road calls
- High efficiency solar cells use latest technology to produce abundant power, even in low light conditions
- Designed for quick, easy installation in all applications
- Solar prevents the need for costly super capacitors by ensuring the system batteries have sufficient starting power
- Weatherproof panel construction for extreme durability and long system life
 - 20+ year anticipated product life
 - 5 year full product warranty (see dealer for details)



ThermoLite CHARGE CONTROLLER



THE BRAINS OF THE SYSTEM:

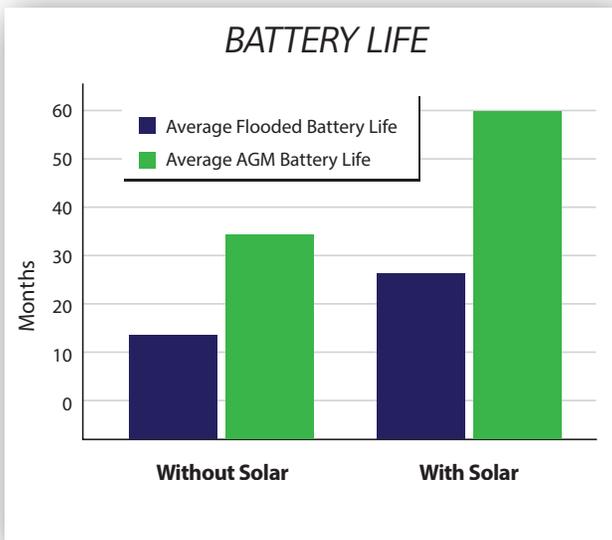
- Critical to proper battery charging and system reliability
- Smart, three-stage charging technology via DC-DC converter
- Completely sealed against the environment
- Rugged automotive-rated circuit design
- Regulates both voltage and current to keep batteries from overcharging
- Designed to support AGM and flooded batteries
- 12V and 24V versions available



CUSTOMER ROI

SOLAR CHARGING BRINGS VALUE IN SEVERAL KEY AREAS:

- 1. Unit battery life - 40-200% improvement
- 2. Asset downtime improvement
- 3. Fuel savings - Alternator and engine offloading



TAX CREDIT ON ThermoLite SYSTEMS

The solar investment tax credit (ITC) is a tax credit that can be claimed on federal corporate income taxes for 30% of the cost of a solar photovoltaic (PV) system that is placed in service during the tax year. This 30% tax credit was recently extended by the U.S. government to be available through 2019 and applies to all costs associated with parts and labor to install the product. After 2019, this tax credit rate will range from 10-26% depending on the year in which construction of the property commences and when the property is placed in service. Customers should consult their tax advisor to file for the credit assuming all terms and conditions for the tax credit are met. May not be applicable if the units are exempt from federal tax

A FULL RANGE OF SOLAR SOLUTIONS FOR ALL APPLICATIONS

SCHOOL BUS



MASS TRANSIT



MOTORCOACH

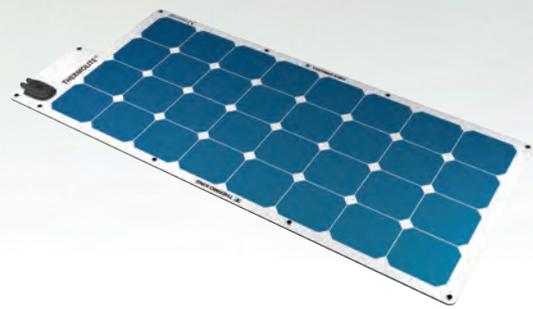




SPECIFICATIONS

40W PANEL

Peak Output Power:	40W
Weight:	4 lbs.
Panel Size:	13" x 29"
Warranty:	5 Years
12V Base Kit	401326
24V Base Kit	401381
40W Expansion Kit:	401327
140' Installation Harness:	401293
8' Installation Harness:	422405
25' Installation Harness:	422406
50' Installation Harness:	422407



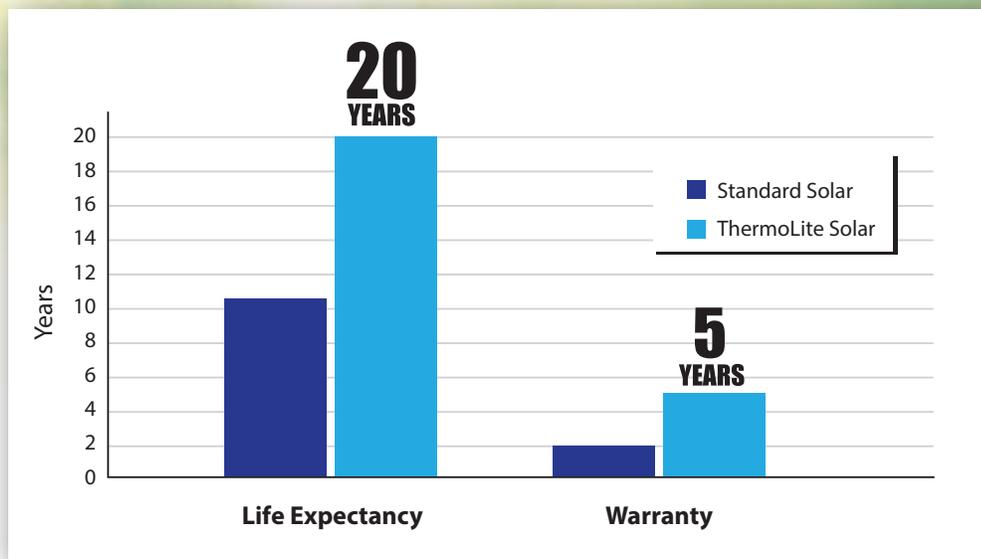
110W PANEL

Peak Output Power:	110W
Weight:	7 lbs.
Panel Size:	22" x 45"
Warranty:	5 Years
12V Base Kit	401300
24V Base Kit	401382
110W Expansion Kit:	401301
8' Installation Harness:	422405
25' Installation Harness:	422406
50' Installation Harness:	422407





ThermoLite *COMPETITIVE ADVANTAGE*



ThermoLite:

- Custom-engineered solution
- Only automotive-rated charge controller on the market
- Estimated 20+ year product life
- High-efficiency PV cells to drive maximum power density in a small space
- Panel constructed of flexible polymer that allows bending and high environmental resistance

Competition:

- NOT rated for automotive environments
 - Charge controller not designed for automotive batteries
 - Glass construction is fragile
 - Uses residential solar connectors (proven to be not rated for automotive environment)
- Panels not flexible to account for roof flexing

SOLAR PANEL COMPARISON GUIDE



	ThermoLite		Generic Panel
	40W	110W	
Size	13" x 29"	22" x 45"	14" x 30"
Weight	4 lbs	7 lbs	10 lbs
Output	40W peak output	110W peak output	30W peak output
Install time	60 minutes	90 minutes	At least 60 minutes
Panel Construction	Flexible polymer	Flexible polymer	Polycrystalline (Glass)
Warranty	5 years - Full warranty	5 years - Full warranty	1 year - Limited warranty
Install Conditions	40°F-100°F	40°F-100°F	Any
3-Stage Charge Controlling	✓	✓	
High-Flex, Low Temp Automotive Wiring	✓	✓	
Plug & Play Connectivity	✓	✓	
Produces Power In low light	✓	✓	
Automotive Rated	✓	✓	



**EXPERT SERVICE AND SUPPORT
ARE AS CLOSE AS THIS SIGN.**

**SUPPORTED BY A NETWORK OF FACTORY-AUTHORIZED
SERVICE CENTERS NATIONWIDE!**

Choose ThermoLite Solar Panels and enjoy the support of the Thermo King Dealer Network.



Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a \$13 billion global business committed to a world of sustainable progress and enduring results.



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