

For reference:      1 Watt = 1 joule/second  
                          1 Watt second (Ws)= 1 joule  
                          1 W/m<sup>2</sup> = 1 J/m<sup>2</sup>/second  
                          1 kW = 1000 Watt  
                          1 hour = 3600 seconds

For the accumulated energy per day, a time factor must be included to the W/m<sup>2</sup> energy readings. This will be the datalogging or recording interval.

**Example:** For a logging interval of 30 minutes = 1800 seconds

$$X \text{ W/m}^2 = X * 1800 \text{ J/m}^2/30 \text{ minutes}$$

There are 48 x 30 minute readings in a 24 hour period, these should be added together to give a single reading of J/m<sup>2</sup>/day.

To convert to MJ/m<sup>2</sup>/day then divide the total by 10<sup>6</sup> (or 1,000,000)

Now	1 MJ/m <sup>2</sup> /day	= 1 MJs/m <sup>2</sup> /day
		= 1000 kWs/m <sup>2</sup> /day
		= 1000 / 3600 kWh/m <sup>2</sup> /day
	1 MJ/m <sup>2</sup> /day	= 1/3.6 kWh/m <sup>2</sup> /day

**So in summary,**

- 1. Multiply W/m<sup>2</sup> reading by the logging periods in seconds**
- 2. Add all readings for a 24 hour period**
- 3. Divide the total by 10<sup>6</sup> to obtain MJ/m<sup>2</sup>/day**
- 4. Divide the MJ/m<sup>2</sup>/day value by 3.6 to obtain**