

Materials List for:

# PARbars: Cheap, Easy to Build Ceptometers for Continuous Measurement of Light Interception in Plant Canopies

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URL: <https://www.jove.com/video/59447>

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## Materials

Name	Company	Catalog Number	Comments
1.5 Ω low temperature coefficient precision resistor	TE Connectivity Ltd., Schaffhausen, Switzerland.	UPW25 series	Could be made using multiple larger resistors in parallel but they need to have low temperature coefficient (i.e. ± 3 ppm/°C). URL for commercial source: <a href="https://bit.ly/2DFuPpm">https://bit.ly/2DFuPpm</a>
Acrylic diffuser	Plastix Australia Pty. Ltd., Arncliffe, NSW, Australia.	445 - Opal White	1200 mm length x 30 mm width x 4.5 mm thick. URL for commercial source: <a href="https://bit.ly/2Bq0fyc">https://bit.ly/2Bq0fyc</a>
Aluminum U-bar	Capral Ltd., Bundamba, QLD, Australia.	EK9160	1220 mm length x 35 mm width x 25 mm depth. URL for commercial source: <a href="https://bit.ly/2PPfJou">https://bit.ly/2PPfJou</a>
Bare solid core copper wire	Non-specific part		
Bolts	Non-specific part		
Clamps	Non-specific part		
Clear epoxy potting resin	Solid Solutions, East Bentleigh, VIC, Australia.	651 - Universal Epoxy Potting Resin	Clear epoxy resin for electrical applications. URL for commercial source: <a href="https://bit.ly/2qY0pHa">https://bit.ly/2qY0pHa</a>
Cyanoacrylate glue	Non-specific part		
Datalogger	Campbell Scientific, Logan, Utah, USA.	CR5000	Other dataloggers that record differential voltages could be used. URL for commercial source: <a href="https://bit.ly/2U7lo5H">https://bit.ly/2U7lo5H</a>
Drill or drill press	Non-specific part		
Glue lined heat shrink	Non-specific part		
Heat gun	Non-specific part		
LED torch	Non-specific part		
Masking tape	Non-specific part		
Photodiodes (50)	Everlight Americas Inc., Carrollton, Texas, USA.	EAALSDSY6444A	It is important that this specific component is used due to spectral response. URL for commercial source: <a href="https://bit.ly/2FzVnuH">https://bit.ly/2FzVnuH</a>
Polyurethane foam filler	Non-specific part		
Quantum sensor	LI-COR, Lincoln, Nebraska, USA.	LI-190R	For calibration of PARbars only. URL for commercial source: <a href="https://bit.ly/2HEfKbh">https://bit.ly/2HEfKbh</a>
Screwdrivers	Non-specific part		

Silicone sealant	Non-specific part		
Solder	Non-specific part		
Solder flux pen	Non-specific part		
Soldering iron	Non-specific part		
Spirit/bubble level	Non-specific part		
Tap and die set	Non-specific part		
Two-core cable	Non-specific part		
Voltmeter	Non-specific part		
Waterproof connectors	Core Electronics, Adamstown, NSW, Australia.	ADA743	2 core waterproof connector. DC power connectors work well. URL for commercial source: <a href="https://bit.ly/2Brcrik">https://bit.ly/2Brcrik</a>