

# ICI

---

INFRARED CAMERAS INC

## ROUND IR WINDOW SERIES QUICK START GUIDE



ICI cameras fall under US Federal Law and Export Control.

2105 W. Cardinal Dr. Beaumont, TX 77705  
Phone: (409) 861-0788  
Toll Free: (866) 861-0788  
[infraredcameras.com](http://infraredcameras.com)  
[support@infraredcameras.com](mailto:support@infraredcameras.com)  
We Are IR™

©Copyright 2022, Infrared Cameras, Inc. - All rights reserved. The contents of this document may not be reproduced in whole or in parts without the written consent of the copyright owner.

Printed in the United States of America.

2105 W. Cardinal Dr.  
Beaumont, TX 77705  
(866) 861-0788  
[www.infraredcameras.com](http://www.infraredcameras.com)

Revision: 01.2022-001

THE MANUFACTURER RESERVES THE RIGHT TO ALTER THE SPECIFICATIONS OF THE PRODUCT WITHOUT PRIOR NOTIFICATION. THE MANUFACTURER ALLOWS HIMSELF THE RIGHT TO MODIFY WITHOUT ANY PRELIMINARY OPINION THE TECHNICAL SPECIFICATIONS OF THE PRODUCT. THIS MANUAL MAY CONTAIN TECHNICAL INACCURACIES OR TYPOGRAPHICAL ERRORS.

NOTICE ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND. NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE ARE PROVIDED "AS IS" WITH ALL FAULTS. ICI DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

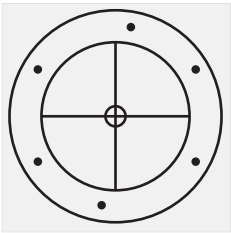
THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR ICI REPRESENTATIVE FOR A COPY.

IN NO EVENT SHALL ICI BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF ICI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

# Package Includes



Round Window



Fitting Template

**FITTING TEMPLATES VARY BY WINDOW SIZE. DO NOT CUT HOLES BEFORE RECIEVING THE FITTING TEMPLATE.**

Location:		
IR Window No:		
Lens Material:		
Transmission:	SW	LW
Notes:		

Window Label

**IR WINDOW INSTRUCTIONS FOR USE**

**CAUTION: THIS DEVICE IS INCOMPLETE WITHOUT THE COVER FITTED**

1. Undo all four protective cover locking screws two complete turns and slide toggle bolts away from cover.
2. Rotate cover anti-clockwise.
3. Take thermographic image (Remember to record data from IR window: location, transmission rate, etc).
4. Rotate cover clockwise to locate cover in closed position.
5. Slide Toggle bolts into location grooves and fully tighten all four locking screws. (Min 0.2 Nm)

Instruction Label

**ENSURE ALL SYSTEM EQUIPMENT AND COMPONENT ITEMS ARE PRESENT BEFORE BEGINNING INSTALLATION**

## Tools

---

- Hole saw or punch
- Electric drill
- Cone drill
- 75 mm (3/16") drill bit
- Center punch
- De-burring tool / file
- Anti-corrosion metal treatment

**ON PERSONAL INSTALLS, THE COMPANY PROVIDES ALL THE TOOLS AND EQUIPMENT REQUIRED TO SUCCESSFULLY COMPLETE THE INSTALLATION. THE HOLES CAN BE CUT USING EITHER A HOLE SAW OR PUNCH.**

**PROFESSIONAL INSTALLATION IS RECOMMENDED.**

**WINDOW AND CUTTING GUIDE VARY BY WINDOW SIZE. DO NOT CUT HOLES BEFORE RECEIVING PACKAGE.**

## PPE Requirements

---

- Safety glasses
- Working gloves (recommended)
- Comply with all site PPE requirements

**ENSURE THE INSTALLATION COMPLIES WITH SITE SAFETY AND PPE REQUIREMENTS. SAFETY GLASSES SHOULD BE WORN AT ALL TIMES. GLOVES ARE HIGHLY RECOMMENDED.**

## Field of View

---

Below is a field of view matrix showing what can be seen through the ICI Round IR windows. This matrix is a guide only and is based on an IR camera that has a standard 24 degree lens with a lens diameter of 2 inches and a maximum viewing angle of 30 degrees (horizontal and vertical). All dimensions are in inches.

IR Target Distance	CP-50 FOV	CP-75 FOV	CP-100 FOV
8 inches	Hor=13.2 Ver=9.9	Hor=16.2 Ver=12.0	Hor=19.2 Ver=15.9
12 inches	Hor=18.0 Ver=13.5	Hor=21.0 Ver=16.5	Hor=24.0 Ver=19.5
18 inches	Hor=25.0 Ver=18.75	Hor=28.0 Ver=21.75	Hor=31.0 Ver=21.75
24 inches	Hor=31.5 Ver=24.0	Hor=34.5 Ver=27.0	Hor=37.5 Ver=30.0

## Transmission Rates

---

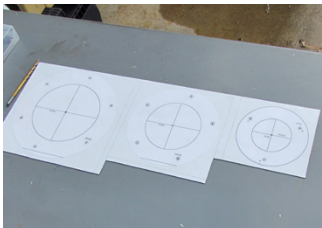
The transmission rate of the IR window being installed is important. This information must be written on the window label that corresponds with the ICI product being installed.

# Fixing Holes

**WINDOW SHOULD BE INSTALLED ON A VERTICAL FLAT SURFACE OR EQUIVALENT LOCATION.**

**A.**

Apply the supplied cutting template to the side of the panel where the window is to be fitted.



**B.**

Mark the fixing holes and the center hole.



**C.**

Use a 5 mm (3/16) bit to drill the fixing holes and pilot hole for the chosen hole cutter.

Refer to the table for the number of holes to drill.



Unit Fixing Holes	
CP-50	3
CP-75	5
CP-100	6

**WINDOW AND CUTTING GUIDE VARY BY WINDOW SIZE. DO NOT CUT HOLES BEFORE RECIEVING PACKAGE.**

D.

Cut the correct size hole using the preferred cutting method.

Refer to the table below which details the hole size required for each of the Round IR windows.



Unit	Size (mm)	Size (inches)
CP-50	50 mm	2
CP-75	75 mm	3
CP-100	100 mm	4

Recommended Hole Saw Details			
Unit	Champion Hole Saw (mm)	Steel (RPM)	St/Steel (RPM)
CP-50	CT5-2 (50)	200-500	120-225
CP-75	CT5-3 (75)	150-300	80-150
CP-100	CT5-4 (100)	100-200	60-120

\* **FOR BEST PERFORMANCE, WE RECOMMEND 1/2" CORDED POWER TOOLS.**

Recommended Hole Punch Details	
Unit	Size (mm)
CP-50	GREENLEE 730BB -2
CP-75	GREENLEE 730BB -3
CP-100	GREENLEE 730BB -

**DESIGN AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE**

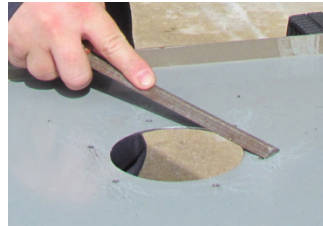
E

Once the hole is cut to size, de-burr, remove any metal shavings and the remaining portion of the cutting template.



F.

Finally, treat all bare metal surfaces with a protective, anti-corrosion coating (paint, sealer, etc.). This will ensure th IR window seals are not affected by long term corrosion and protects the integrity of the panel.



## Fitting the Window

A.

Remove the back plate from the Round IR window; then, place the body of the unit, complete with seals, on the front of the panel.



B.

Place the back plate inside the panel and fit the screws through the back plate into the body of the Round IR window. Tighten screws to 1.2 Nm (10.6 in-lb). This equates to fully hand tight using a screwdriver.



# Labels and Instructions

Ensuring that Round IR window is correctly labeled is essential. Without the correct information, it will not be useful to its full effect. The ICI Round IR window is supplied with two labels: Instruction Label and Window Label.



### IR WINDOW INSTRUCTIONS FOR USE

**CAUTION: THIS DEVICE IS INCOMPLETE WITHOUT THE COVER FITTED**

1. Undo all four protective cover locking screws two complete turns and slide toggle bolts away from cover.
2. Rotate cover anti-clockwise.
3. Take thermographic image (Remember to record data from IR window: location, transmission rate, etc).
4. Rotate cover clockwise to locate cover in closed position.
5. Slide Toggle bolts into location grooves and fully tighten all four locking screws. (Min 0.2 Nm).

Location: S80012

IR Window No: S80012-2

Lens Material: Platinum Polymer

Transmission: SW N/A LW 0.48

Notes: Load side bus connections for distribution panel bus duct disconnect. "A" phase left, "B" phase middle, "C" phase right.

The Instruction Label should be placed next to the window and details the steps to be taken to ensure the unit is used correctly.

The Window Label allows the thermographer to note the number of targets, emissivity of the targets, transmission rate of the IR window, etc. The most common method of locating the targets required is by using the clock face method, i.e. bus bar connections at 4 o'clock, etc. An example of a completed label is shown below.

## About ICI / Contact

---

Infrared Cameras, Inc.  
2105 W. Cardinal Dr.  
Beaumont, TX 77705

Phone: (409) 861-0788 | Toll Free: (866) 861-0788 | International: (409) 861-0788

General Inquiry: [support@infraredcameras.com](mailto:support@infraredcameras.com)

Website: [www.infraredcameras.com](http://www.infraredcameras.com)

You may reach a representative by phone or email Mon – Fri 8:00AM – 5:00PM CST.

ICI manufactures complete systems and software. We can provide complete engineering, software, and OEM solutions. Our Fortune 500 clients rely on us for infrared equipment and thermography training (which we offer through the Infrared Training Institute).

In addition to providing custom germanium, silica, and sapphire optics, we also build windows for enclosures, as well as custom pan and tilt units. We can even provide customizable explosion-proof systems.

Our knowledge and experience stems from years of using infrared imaging and temperature measurement instruments to provide solutions to: managers, engineers, scientists, inspectors and operators in space, power companies, medical, pulp and paper, food industry, research and development, and various process industries. You can see our products and services used in industrial, commercial, and government applications worldwide. Originally named Texas Infrared (still DBA), Infrared Cameras, Inc. has been in business since March, 1995.

Thank you for your dedicated and continued support.