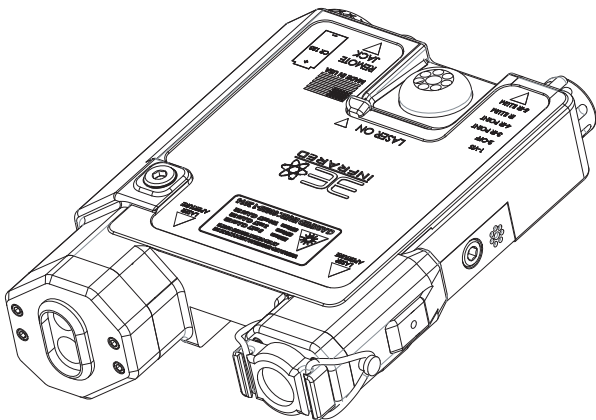




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MADE IN



U. S. A.

Designate IR-V Operator Manual

## **SAFETY SUMMARY**

### **GENERAL**

This manual contains operating instructions and maintenance procedures, which may cause injury or death to personnel or damage to equipment if not properly followed. Prior to performing any task, the WARNINGS, CAUTIONs, and NOTEs, included in that task, shall be reviewed and understood.

## **DEFINITIONS**

### **WARNING**

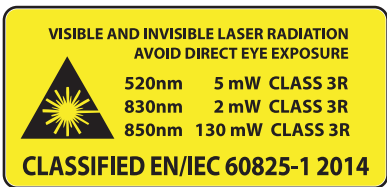
Highlights an essential operating or maintenance procedure, practice, condition, or statement, which, if not strictly observed, could result in injury to or death of, personnel, or long term health hazards.

### **CAUTION**

Highlights an essential operating or maintenance procedure, practice, condition, or statement, which, if not strictly observed, could result in damage to, or destruction of, equipment or loss of mission effectiveness.

### **NOTE**

Highlights an essential operating or maintenance procedure, condition, or statement.



**WARNING**

Always be sure that the Designate IR-V is pointed away from yourself and others before turning it on.

**WARNING**

Be sure the weapon is CLEAR and on SAFE before attaching, cleaning, or inspecting the Designate IR-V.

**WARNING**

Never look directly into any laser beam.  
Never view a laser beam through a magnifying device.  
Do not shine the laser beam into the eyes of another person.  
Never shine a laser device at reflective surfaces.

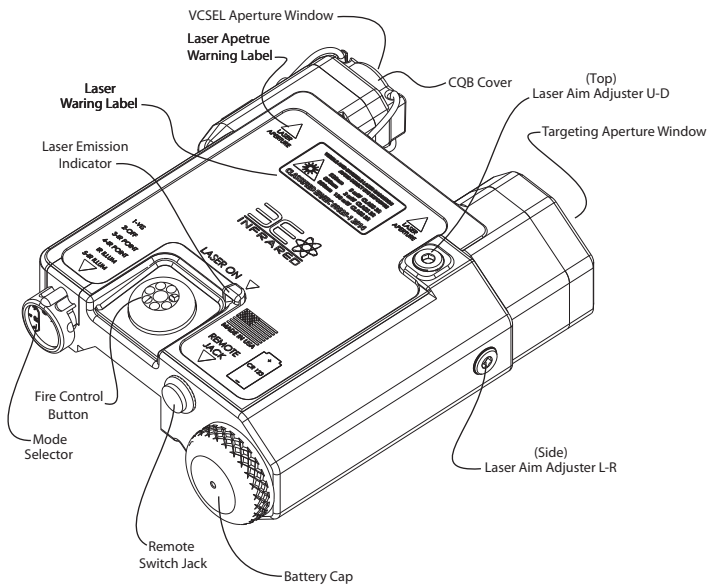
**WARNING**

Always store the Designate IR-V with the Selector Switch in the OFF position when not in use.

**NOTE**

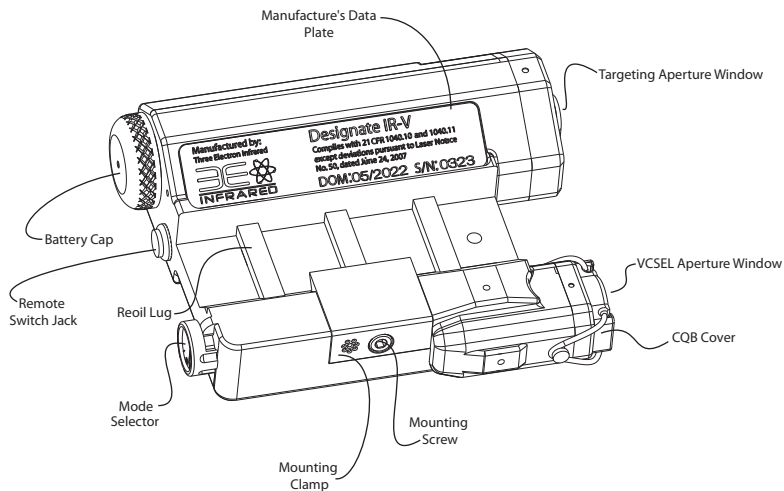
The Designate IR-V is not serviceable or repairable.  
Any alterations or repair actions, beyond those described in this manual, will automatically void the Designate IR warranty.

## FEATURES AND CONTROLS (Top)





## FEATURES AND CONTROLS (Bottom)



# MODES OF OPERATION

## MODE SELECTION (1-VIS)

Visible aim laser is selected.

1-VIS

2-OFF

3-IR POINT

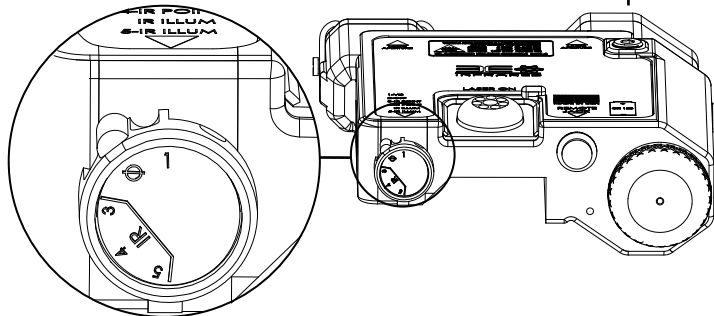
4-IR POINT  
IR ILLUM

5-IR ILLUM

OFF



**Visable aim  
laser on**



## MODES OF OPERATION CONTINUED

### MODE SELECTION (2-OFF)

In the off position, the  
Designate IR-V will not  
operate.

1-VIS

2-OFF

3-IR POINT

4-IR POINT

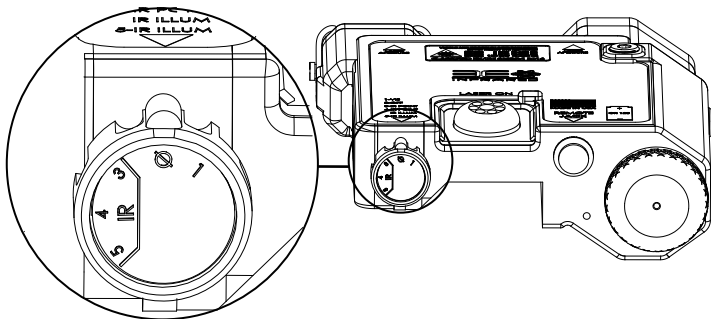
IR ILLUM

5-IR ILLUM

OFF



OFF



# MODES OF OPERATION CONTINUED

## MODE SELECTION (IR-3)

IR aim laser is selected.

1-VIS

2-OFF

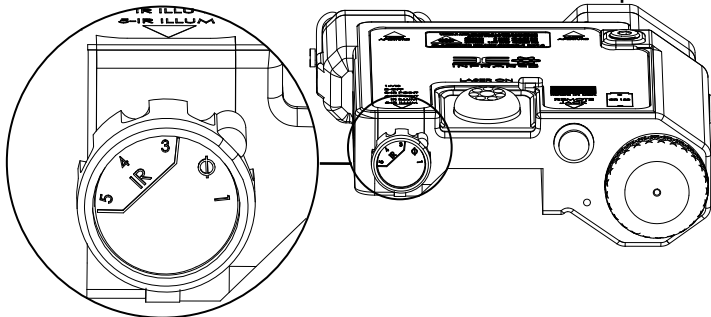
3-IR POINT

4-IR POINT

IR ILLUM

5-IR ILLUM

OFF



# MODES OF OPERATION CONTINUED

## MODE SELECTION (IR-4)

IR aim laser and VCSEL illuminator  
lasers are selected.

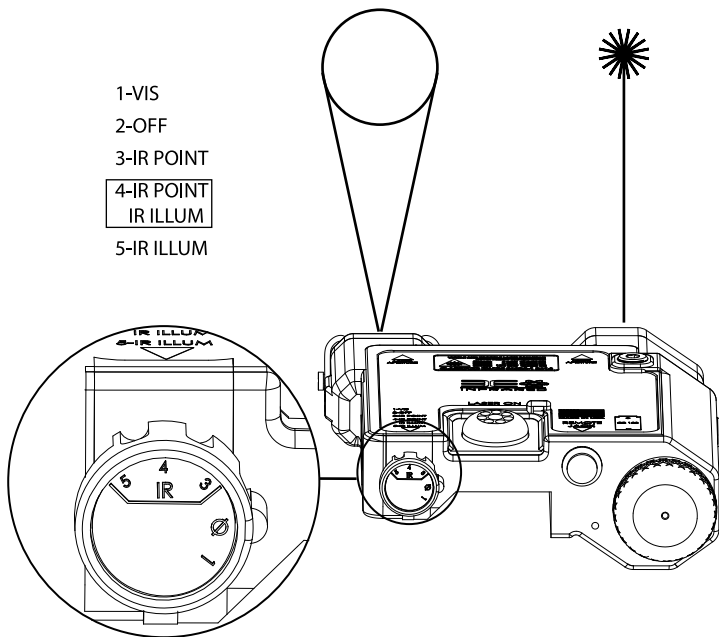
1-VIS

2-OFF

3-IR POINT

4-IR POINT  
IR ILLUM

5-IR ILLUM



# MODES OF OPERATION CONTINUED

## MODE SELECTION (IR-5)

VCSEL illuminator  
laser is selected.

1-VIS

2-OFF

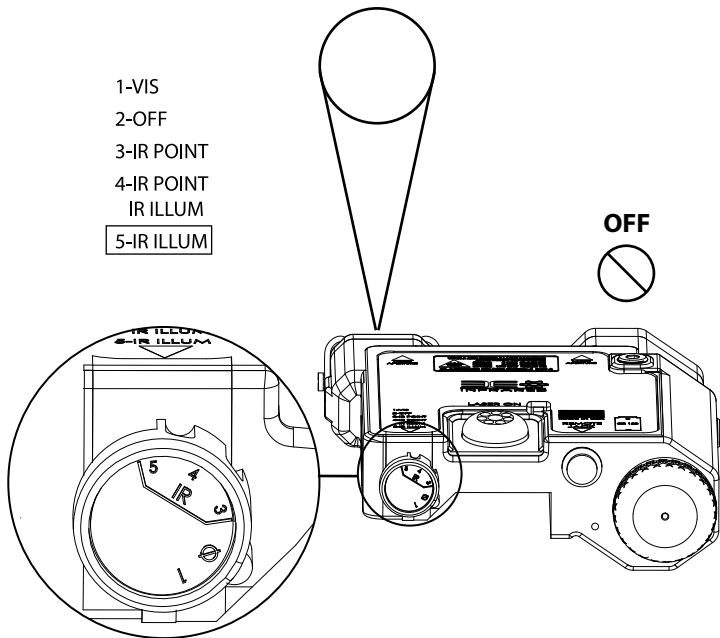
3-IR POINT

4-IR POINT

IR ILLUM

5-IR ILLUM

OFF



## MODE ACTIVATION

Once the mode of operation has been selected, the Designate IR-V may be used in that mode by activating the system as follows:

### **Momentary Operation**

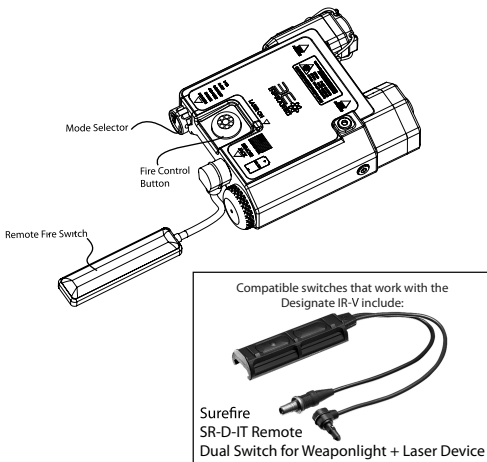
Pressing and holding the Fire Button or Remote Fire Switch operates the Designate IR in the selected mode. The selected laser(s) will remain on until the Fire Button or Remote Fire Switch is released.

### **Continuous Operation**

Pressing the Fire Button or Remote Fire Switch twice in rapid succession (Double-Tap) operates the Designate IR-V in the continuous mode. The selected laser(s) will remain on until the Fire Button or Remote Fire Switch is pressed a third time (single tap).

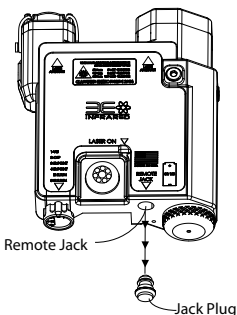
### **(Optional) Remote Fire Switch**

When installed, the optional Remote Fire Switch may be used to provide the same functionality as the Fire Control Button.



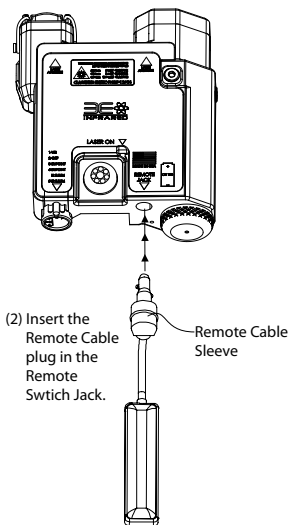
## ATTACHING REMOTE ACTIVATION DEVICES

(1)



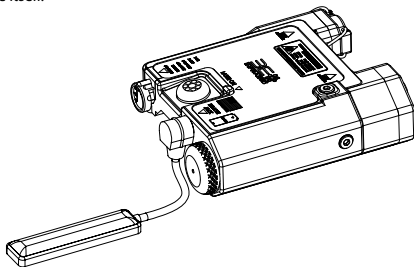
- (1) Remove the Jack Plug from the Remote Switch Jack.

(2)



- (2) Insert the Remote Cable plug in the Remote Switch Jack.

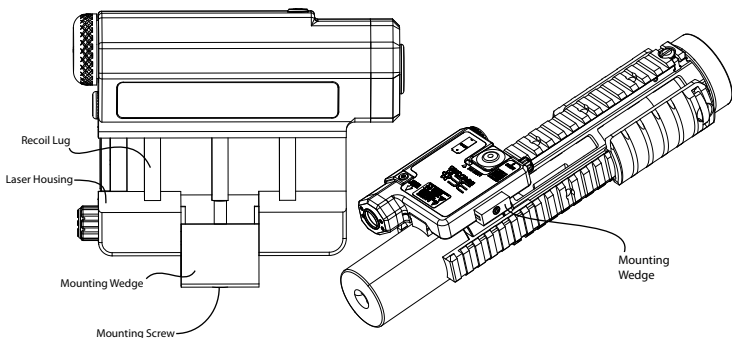
When the Remote Cable Switch is plugged into the Remote Jack, it automatically locks in place. To remove it, pull back on the cable sleeve. Do not remove the Remote Cable Switch by pulling on the cable itself.





## MOUNTING PROCEDURES

Bottom View



### (STEP 1)

With the Designate IR-V in the off position, loosen the mounting screw until the mounting wedge can be pulled away from the laser housing.

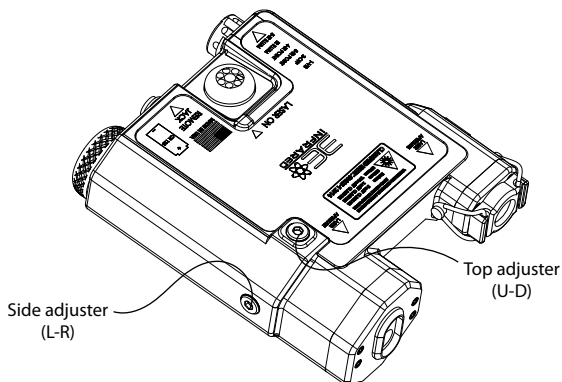
### (STEP 2)

With the Designate IR-V tilted at approximately a 30deg slide it onto the rail until it stops and has engaged with the weapon mounting rail.

### (STEP 3)

Be sure the recoil lugs on the Designate IR-V are mated with the mounting rail, and tighten the mounting screw until the Designate IR is securely mounted to the rail system.

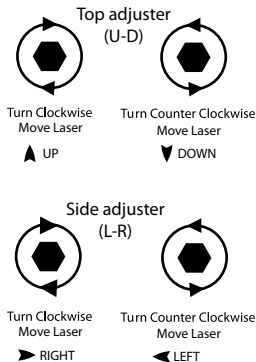
## LASER AIM ADJUSTERS



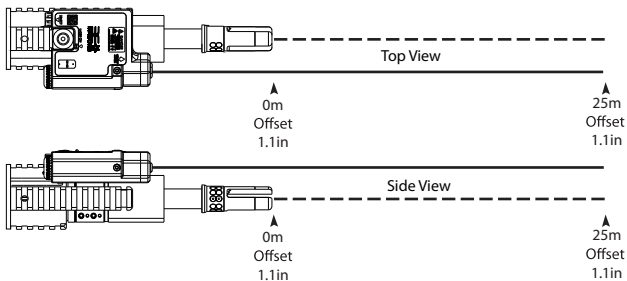
### WARNING

Do not over tighten laser adjusters

### Movement for aim lasers



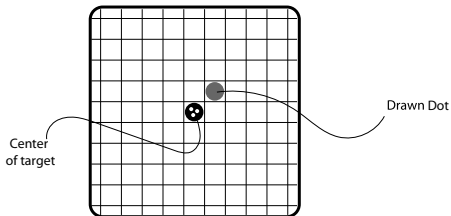
## Constant offset zero



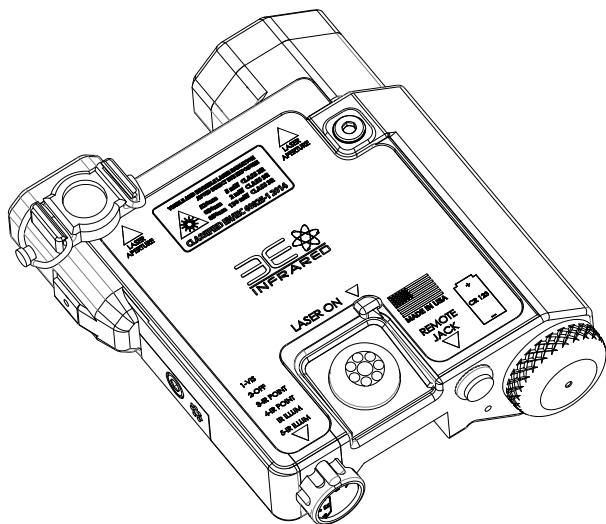
The constant offset method allows the sights to be accurate at multiple distances, not just one. The laser is aligned parallel to the barrel's center axis and never intersects the bullet trajectory. Since the lines are parallel, regardless of the distance the the point of impact will be the same distance from the laser dot disregarding wind, bullet drop, etc.

## ESTABLISH YOUR ZERO

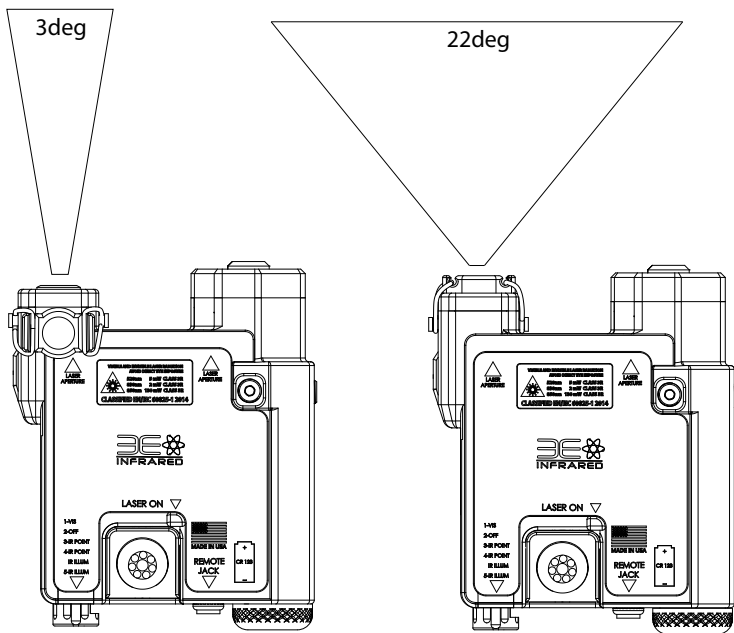
- (1) At a designated shooting location, place the target at distance of 25m.
- (2) With a black felt pen, draw dot on your target that it is 1" High and 1" Right of center.
- (3) Turn on the visible offset laser and sight in on the target so that the visible laser is centered on the drawn dot.
- (4) Fire a 3 shot group while keeping the visible laser aligned with the drawn dot.
- (5) Check the point of impact for the shot group and adjust if needed.
- (6) Repeat steps 4-5 until your shot group is aligned with center of the target.



## CQB Cover



## CQB Cover



Without CQB Cover

With CQB Cover

The CQB cover changes the VCSEL laser output from 3deg to 22deg for use indoors. This wider beam divergence not only allows the user to illuminate a larger area but also provides protection for other night vision devices during force on force training.

## **INSPECTION / CLEANING**

### **WARNING**

Confirm the mode selector switch is in the off position and, if mounted the weapon is CLEAR and on SAFE before cleaning or inspecting the Designate IR.

### **WARNING**

Chemicals, other than isopropyl alcohol, may damage the Designate IR system.

### **NOTE**

No user serviceable parts are located inside of the Designate IR.  
Removal of the Aperture Bezel Mounting Screws, or any covers, will void the Designate IR warranty.

## **MODEL NUMBER AND EQUIPMENT NAME**

This manual applies to the following Designate IR models:  
Designate IR-V

## **MANUFACTURER**

Three Electron Infrared  
17202 NE 2nd circle  
Vancouver WA.  
98684

## **PURPOSE OF EQUIPMENT**

The Designate IRV is a multifunctional laser device that emits visible and infrared (IR) light used for precise weapon aiming.

# TECHNICAL SPECIFICATIONS

## SIZE AND WEIGHT

Weight (with battery)	2.1oz
Length	3.78 inches
Width	2.85inches
Height (above rail)	.45 inches

## BATTERIES AND PERFORMANCE

Batteries	One CR123 lithium
Battery life	> 5 Hours
Waterproof rating	>IP67

## LASERS

### Visible Aim Laser

Output power	<5mw
Beam divergence	0.5 mrad ( $\pm$ 0.3 mrad)
Wavelength	520 nm
Range	>50m

### IR Aim Laser

Output power	< 0.7 mW
Beam divergence	0.5 mrad ( $\pm$ 0.3 mrad)
Wavelength	820 – 850 nm
Range	>600m

### VCSEL Illumination Laser

Output power	<150 mW
Beam divergence	3 deg
Wavelength	820 – 850 nm
Range	>800m

## **SERVICE, RMA, & RETURN INSTRUCTIONS**

For service, repair, or replacement, first contact the point of sale. To assist with determining if the item is repairable, the following information will be requested:

- a. Serial number of the item.
- b. Thorough description of the perceived malfunction or damage.
- c. If known, an explanation as to how the malfunction or damage occurred.

If it is determined that the item is under warranty or should be returned for repair, a Return Material Authorization (RMA) number will be provided.

When returning the Designate IR for service / repair, the following procedures should be followed to prevent any additional damage:

### **PACKING**

1. Be sure that the Designate IR-V is free of all contaminants such as dirt or any other foreign material.
2. Remove the battery.
3. Place the Designate IR-V in soft packaging material and ship in a new, sturdy box.

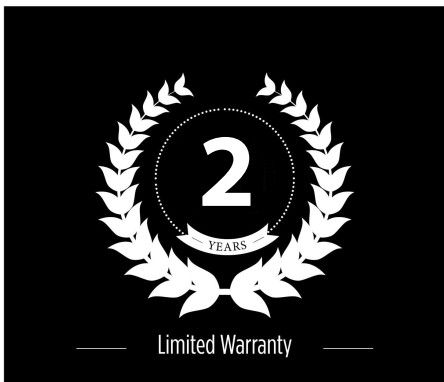


## WARRANTY INFORMATION

Designate IR products are under warranty for material defects and workmanship for a minimum of (2) years from the purchase date. This warranty does not cover damage due to misuse or battery leakage.

### NON-WARRANTY SERVICE

Non-warranty service is available. The unit will be tested and evaluated for failure, and permission will be obtained prior to any repairs being performed.





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