

TASCO SALES (AUST) PTY LTD

## CONSIDERATIONS FOR END USERS WHEN SELECTING AN OPTIC

### Cost

Thermal optics can be quite expensive, with prices ranging from a few to over 10 thousand dollars.

The cost is often reflective of the technology and features included. High-end models with advanced sensors, longer detection ranges, will naturally be more expensive. It's important to balance your budget with the features you need for your specific hunting activities.

### Resolution

The resolution of the thermal sensor is crucial for image clarity. Higher resolution sensors (e.g., 1280x1024 pixels) provide more detailed images, which can be essential for identifying game at longer distances. Lower resolution sensors (e.g., 384x288 pixels) are more affordable but may offer less detail, which could be a limitation in certain hunting scenarios.

### Recognition range

The DRI (Detection, Recognition, and Identification) system, based on the Johnson criteria, is used to measure the performance of thermal optics. It defines three key distances:

**Detection Distance:** The maximum range at which a thermal scope can detect a heat source. At this distance, the target appears as a bright spot, but its exact nature is not discernible.

**Recognition Distance:** The range at which you can determine the type of object (e.g., human, animal, vehicle). This distance is shorter than the detection distance and requires the target to cover more pixels on the thermal sensor.

**Identification Distance:** The range at which you can identify specific details about the target, such as distinguishing between different types of animals or vehicles.

### Factors Affecting Recognition Distance

**Resolution:** As you only get the full definition of the sensor at base magnification due to all thermal optics having digital zooms, higher resolution sensors provide clearer images at higher magnifications, allowing for better recognition at longer distances. For example, a 1024x768 sensor will offer over twice recognition capabilities than a 384x288 sensor.

**Lens Size:** Larger lenses (60mm) have a narrower field of view but can detect and recognize targets at greater distances compared to smaller lenses (50mm).

**Target Size and Contrast:** Larger targets and those with higher thermal contrast against their background are easier to recognize at longer distances.

**T .** 02 9938 3244   **W .** [www.tasco.com.au](http://www.tasco.com.au)   **ABN .** 54 000 502 910

**F .** 02 9939 2972   **E .** [sales@tasco.com.au](mailto:sales@tasco.com.au)   Unit 6 Winbourne Estate, 9-13 Winbourne Rd, Brookvale, NSW 2100

**Postal Address:** PO BOX 6176, Frenchs Forest, NSW 2086

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**Behaviours:** Long range recognition can be greatly enhanced by observing the behaviours of the target species. As thermal optics offer a highly stealthy viewing platform, it's possible to observe behaviours and movement that can help in long range identification.

### Practical Examples

Small Targets (rabbits, cats, foxes): Recognition distance might be limited to a few hundred meters due to their small size.

Large Targets (Pigs, deer or cattle): Recognition distance can extend up to 1000 meters or more, depending on the thermal scope's specifications.

### Ease of Use

It's important to consider the user interface and controls of the thermal scope. Some brands come with intuitive menus and easy-to-use buttons, while others might have a steeper learning curve. It's important to choose a scope that you can operate comfortably, especially in the field.

### Weight and Size

The weight and size of the thermal scope can affect your mobility and comfort during hunts. Lighter and more compact models are easier to carry and handle, especially during long hunting trips. However, they might have fewer features compared to larger, more robust models.

### Legal Considerations

Before purchasing and using thermal optics, it's important to check local regulations and laws regarding their use in hunting. Some regions have restrictions on the use of thermal imaging devices for hunting, so ensure you are compliant with all legal requirements.

### Training and Practice

Interpreting thermal images requires some practice. Understanding how to read the heat signatures and differentiate between animals and other heat sources is crucial for effective use. Spend time familiarizing yourself with the scope and practicing in different environments to improve your skills

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