Gen 3 White Phosphor Technology/P-45

Users who rely on Exelis Gen 3 picture clarity, performance and resolution now have the option of a color and contrast variant.

Traditional image intensifier tubes use a P-43 phosphor screen output, resulting in the yellow-green image that has become the signature view through most Gen 3 night vision technology.

Using a P-45 phosphor screen instead yields an alternate coloration closer to black and white imagery, which some users prefer. Exelis proudly offers this option in peak performance Gen 3 tubes.
Gen 3 White Phosphor Technology/P-45

FEATURES AND BENEFITS

Many military professionals – both U.S. and international – have very specific individual preferences when it comes to their kit. In this sense, the benefits of the Exelis Gen 3 P-45 white phosphor option are closely linked with user preference, as well as mission-specific requirements.

> Capitalizes on existing high performance of Gen 3 night vision

> Can be incorporated in virtually any Exelis image intensifier tube, including the F9800, F9810 and F9815 series

> Offers different contrast and color than traditional phosphor

In a recent field research study, 36 members of the U.S. Maryland National Guard used and compared white and green phosphor technologies. Participants reported that white phosphor enhanced their overall object recognition while providing contrast sensitivity equivalent to green phosphor.

* Images digitally modified to illustrate comparative differences.

SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>P-45, WB</th>
<th>P-43, GY</th>
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</thead>
<tbody>
<tr>
<td>Composition</td>
<td>Y₂O₂S:Tb²</td>
<td>Gd₂O₂S:Tb² (gadolinium oxysulfide)</td>
</tr>
<tr>
<td>Color</td>
<td>white</td>
<td>yellow-green</td>
</tr>
<tr>
<td>CIE Color Coordinates</td>
<td>0.263, 0.342</td>
<td>0.337, 0.561</td>
</tr>
<tr>
<td>Persistence</td>
<td>Short</td>
<td>Medium</td>
</tr>
</tbody>
</table>

1 Y₂O₂S:Tb² (P45), white (545 nm), 1.5 ms decay, low afterglow, for low-energy X-ray

2 Gd₂O₂S:Tb² (P43), green (peak at 545 nm), 1.5 ms decay to 10%, low afterglow, high X-ray absorption, for X-ray, neutrons and gamma

SPECTRAL OUTPUT COMPARISON

![Spectral Emission Graph](image)

Gen 3 intensifier tube

Exelis Inc.
7635 Plantation Road
Roanoke, Virginia 24019-3222
USA
Ph #: 540 563 0371
nvsales@exelisinc.com

www.exelisinc.com

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