

MIL-P-7788F
AMENDMENT 1
29 August 1994

MILITARY SPECIFICATION

PANELS, INFORMATION, INTEGRALLY ILLUMINATED

This amendment forms a part of Military Specification MIL-P-7788F dated 16 Nov 1992, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 6

3.1, line 5: Change "All of the" to "The."

3.1, line 7: Change "special" to "qualification."

PAGE 7

3.1.1, Insert before last sentence: "The manufacturer shall also submit an Illumination Test Facility Certification Report, certified by QAR."

3.1.1, line 8: Before "parts" insert "plant location,".

3.1.2: After last line, add:

Qualification by similarity for all classes in Types IV, V, VI, and VII:
(The same manufacturing process must be used for all.)

Type IV: Classes 1-W, 2-R, 1-NVIS Green A

Type V: Classes 1-BW, 1-NVIS Green A

Type VI: Classes 1-W, 2-R, 1-BW, 1-NVIS Green A

Type VII: Classes 1-W, 2-R, 1-BW, 1-NVIS Green A

Typically, any combination within a particular Type that has all illumination colors represented (i.e., red, white, blue-white, and NVIS Green A) as well as both background colors (i.e., black and gray) will qualify by similarity for all Classes within that Type. (E.g., Successful qualification of Type V Classes 1-W, 2-R, 1-BW, 1-NVIS Green A will result in qualification by similarity for the remaining Types and Classes in Type V.) As stated above, NVIS Green A is never qualified by similarity. The only qualification by similarity across Types for illuminated color (except NVIS Green A) occurs for

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PAGE 7 (cont.)

3.1.2 (cont.):

Types IV and V since both use incandescent lamps for illumination. Other qualification by similarity options can be arranged; contact the qualifying activity for approval.

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3.4.3.1: Change "The back of the panel shall be opaque black and shall not permit stray light leakage." to "The back of the panel shall be opaque black or the same opaque color as the background of the front of the panel; in either case, the back of the panel shall not permit stray light leakage."

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3.4.3.3, After "Printed circuit board." add "(Types V and VII)."

3.4.3.3.1, Change "(Class 1-NVIS Green A)" to "(Types V and VII, Class 1-NVIS Green A)."

3.4.3.3.1, line 2: Change "becomes" to "serves as."

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3.4.3.4.2, Before last sentence insert: "The luminance versus voltage curve for a Type VII (LED) panel shall approximate that of a Type IV, V, or VI panel, depending on the application."

3.4.3.5: Change line 1 from "Type IV panels" to "Type IV and VI panels."
Change line 4 from "Type V, VI, and VII panels" to "Type V and VII panels."

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3.4.4 Change last sentence to: "For test purposes, all lamps shall be operated from direct current (DC), except for Type VI panels."

3.5, line 3: After "military specification drawings" add "(including current)."

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3.8.3: Add a column to the right of last column as shown below:

Luminance of Marking
(cd/m²)

2.1 +/- 1.4
10.3 +/- 6.9
2.1 +/- 1.4

3.4 +/- 1.7
6.9 +/- 3.4
3.4 +/- 1.7
3.4 +/- 1.7

3.8.5: Add a column to the right of last column as shown below:

Minimum Luminance
(cd/m²)

0.51
1.7
0.69
0.51

1.0
1.7
1.0
1.0

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3.9 and 3.10: After "0.1 footlambert" insert "(0.3 cd/m²)."

3.13: At end of first line, add "circuit continuity (3.5), insulation resistance (3.6),".

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Table I: In "POST ENVIRONMENTAL TESTS" section, add "CIRCUIT CONTINUITY (3.5) and INSULATION RESISTANCE (3.6)" and place an "X" next to each one under GROUP I and GROUP III columns.

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4.2.1.3, line 3: After "specification," add "(Group II Quality Conformance Tests of Table I, unless the qualifying activity requests Group I Qualification Tests of Table I)."

Add:

4.2.1.3.1 Retention of qualification samples. At the end of the aforementioned two year qualification approval period, the contractor must submit two samples of each type and class in order to retain qualification listing on the Qualified Products List (QPL) for an additional two year period. As a minimum, these retention samples will be subjected to the tests described in 4.2.1.4.1 Retention tests. At the discretion of the qualifying activity, retention by similarity may be permitted in a manner similar to that described in 3.1.2 Qualification by similarity. In addition, as a minimum, the contractor must satisfactorily complete a Form DD 1718 (Certification of Qualified Products) as well as an Illumination Test Facility Certification Report, certified by QAR.

4.2.1.4.1 Retention tests. As a minimum, samples received for retention of qualification will be subjected to those tests listed as "GROUP II QUALITY CONFORMANCE TESTS" in Table I. The Government reserves the right to require additional testing if deemed necessary.

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Table II: Change number for Gloss test from "(24)" to "(25)." Add "(26) Circuit Continuity (4.5.3)" and place an "x" under columns 1 through 4.

Renumber former tests as follows:

- (27) Insulation Resistance (4.5.4)
- (28) Lacquer Thinner (4.5.16)
- (29) Engine Oil (4.5.16)
- (30) Hydraulic Fluid (4.5.16)
- (31) Grease Cleaner (4.5.16)
- (32) Surface Endurance (4.5.17)

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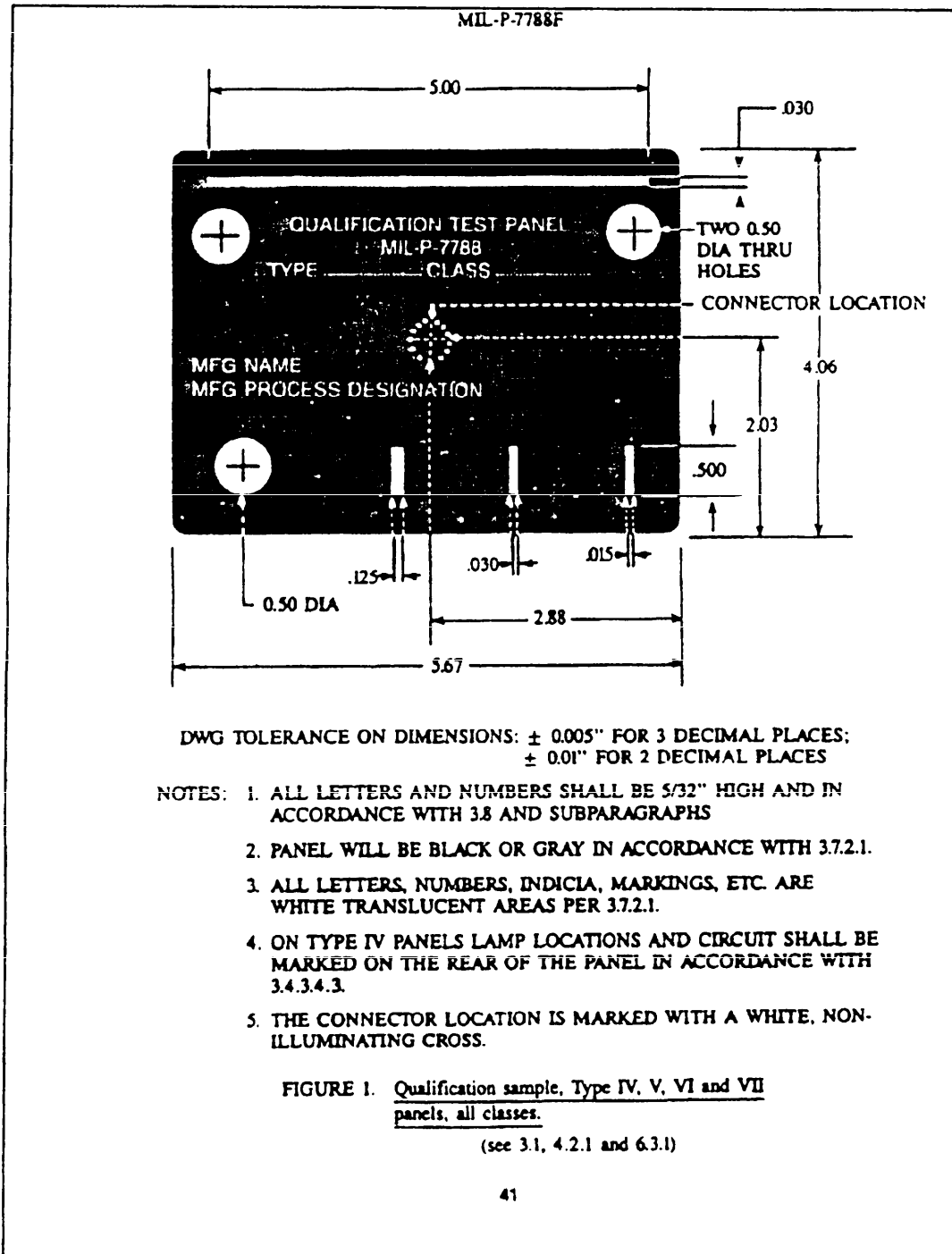
4.5.6.2: Next to existing "M" and "P" columns, insert the following "M" and "P" columns:

"M" cd/m ²	"p" cd/m ²
1.7 to 5.1	1.61 to 5.41
1.7 to 5.1	1.61 to 5.41
3.4 to 10.3	3.25 to 10.96
1.7 to 5.1	1.61 to 5.41

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Delete page 41 and replace with the following:



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Custodians:

Army - AV
Navy - AS
Air Force - 11

Preparing Activity:

Navy - AS

Review Activities:

Army - MI
Navy - MC, SH
Air Force - 11, 99