



Validation Security Stickers With Ensure™ Custom Image for Thermal Transfer Printing

Series T7300

For use on Multi-Year License Plates

Product Bulletin T7300

May 2014

Replaces PB T7300 dated April 2014

Description

3M™ Validation Security Stickers Series T7300 are designed and manufactured for thermal transfer printing of reflective validation stickers, and other types of general purpose stickers, for application to smooth surfaced multi-year license or reciprocity plates. Series T7300 stickers are available in a wide array of configurations according to the customer's design requirements.

Series T7300 stickers are sold either as die-cut stickers on rolls or pre-tipped onto forms.

The Series T7300 validation security stickers are available in ten standard colors as shown on the Validation Sheeting Color Chart. The day and night color of the stickers is similar and will remain highly reflective when viewed at wide entrance angles. The stickers are designed for thermal transfer printing to produce various color and design combinations on finished validation stickers using the 3M™ Thermal Transfer Imaging System VP5000 or other 3M approved system.

3M Series T7300 stickers contain directional security marks that are an integral part of the sticker which makes unauthorized reproduction extremely difficult. These marks are spaced no further than .75 inches (1.91 cm) from each other so that a part of one mark is visible on each 1 inch x 1.5 inch (2.54 cm x 3.81cm) validation sticker. These marks are available in reverse image print (ER). 3M validation security stickers are available with customized marks as mutually agreed upon by the purchaser and 3M.

3M™ Ensure™ Custom Image

The directional security marks facilitate effective visual verification of validation sticker authenticity, when properly applied to a vertically mounted license plate on an automobile, as follows:

- A. The marks will be visible to a viewer standing directly in front of the sticker at a distance of 4-8 feet (1.2–2.5m). This represents an angle of 30° above the perpendicular to the plate.
- B. The mark will not be visible to a viewer:
 1. When standing directly in front of the sticker at a distance of either two feet (.6m) or 20 feet (6.1m).
 2. When the viewer has stepped from the head-on viewing position to either side thus forming an angle greater than 45° to the sticker.

The directional security mark will be visible in either diffuse daylight or by retroreflected light at night and will not alter the color or reduce the sticker brightness below the minimum specified levels. The marks will not interfere with appearance and legibility of the finished validation stickers. The directional security marks cannot be removed by chemical or physical means from the finished validation sticker, applied or unapplied, without visibly damaging the sticker's reflectivity.

Performance Considerations

3M™ Validation Security Stickers Series T7300 have been designed for the economical and effective production of reflective validation stickers for use on multiple year license and reciprocity plates. Recommended 3M application procedures should be followed for maximum durability.

A. Reflectivity

Minimum reflectivity values of Series T7300 are shown in Table A.

Table A
Minimum Coefficient of Retroreflection Candlepower per Foot per Square Foot Candelas per Lux per Square Meter

		0.2° Observation Angle ¹	
Sticker Color		Entrance Angle ²	
		-4°	40°
White	T7300	50	15
Yellow	T7301	30	8
Red	T7302	10	3
Gold	T7303	30	10
Orange	T7304	6	2
Yellow-Green	T7305	24	8
Blue	T7306	14	5
Green	T7307	28	8
Magenta	T7308	12	3
Lemon-Yellow	T7309	28	11

¹Observation (Divergence) Angle — The angle between the illumination axis and the observation axis.

²Entrance (Incidence) Angle — The angle from the illumination axis to the retroreflector axis. The retroreflector axis is an axis perpendicular to the retroreflective surface.

All measurements shall be conducted in accordance with ASTM E-810, "Standard Test Method for Coefficient of Retroreflection of Retroreflective Sheeting." The reflectivity of the sticker, totally wet by rain, will not be less than 90% of the value listed in Table A. Wet performance measurements shall be conducted in accordance with ASTM E-810.

Contact your 3M Technical Representative for wet performance measurement test set-up.

Application

3M™ Validation Security Stickers Series T7300 are supplied with a pressure sensitive adhesive for easy, vandal resistant application, using finger pressure to license and reciprocity plates that are properly prepared (smooth, dry and clean). The minimum application temperature for applying finished stickers to a plate is -10° F (-23° C).

A maximum of three stickers overlaid per plate is recommended for these stickers.

3M Series T7300 stickers are warranted to be compatible with license plates made from 3M reflective sheeting. User should verify proper adhesion performance on any other surface before using.

Fabrication

A. 3M™ Validation Security Stickers Series T7300 are provided die-cut on rolls or pre-tipped onto forms, based on the customer's requirements. The rolls of stickers can be perforated and back instructions printed.

Contact your 3M Technical Representative for more information.

B. 3M™ Series T7500 forms — stickers pre-tipped onto forms.

C. 3M™ Thermal Transfer Printer VP5000 or other approved 3M printer.

D. 3M™ Thermal Transfer Ribbon Series VP5130 or other ribbons approved by 3M.

E. Cutting — Stickers may be hand cut individually or into strips of multiple stickers or processed into book form. Stickers can also be packaged in roll form or into fanfold boxes.

Contact your 3M Technical Representative for more information on sticker packaging formats.

Cleaning

The reflective stickers may be cleaned with a soft cloth or brush, using warm water, soap, then a clean water rinse, or with non-abrasive automobile cleaners or polishes. Tar, oil or road film may be removed by using a cloth moistened with kerosene.

Storage

Stickers or stickers on forms should be stored in a cool, dry area and used within one year after date of receipt.

Health and Safety Information

Read all health hazards, precautionary, and first aid statements found in the Material Safety Data Sheet, and/or product label of chemicals prior to handling or use.

FOR INFORMATION OR ASSISTANCE

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