# LMSC PACKAGING STANDARD

# SPECIAL PACKAGING FOR SOLAR CELLS

# **APPLICABLE PARTS**

Solar Cell s as referenced in contracting document.

#### **OBJECT**

To protect fragile and critical solar cells by means of a container with individual compartments or slots.

## **UNIT PACKAGING**

<u>Single Cell</u> – Package 100 or less solar cells in a molded expanded polystyrene foam container (MIL–P–19644). Each cell must be inserted into a close–fitting slot. Slots to be arranged in a minimum area securing solar cells upright. The container should have a cover of the same material as bottom (unless it is transparent). The cover must hold parts in the slots. Containers must have provisions for nesting when stacked (Figure 1).

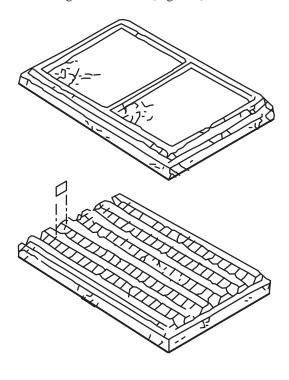


Figure 1. P10139–001

<u>Five-Cell Assembly</u> – Package a minimum of 20 solar cell, Type N, five assemblies in a molded expanded polystyrene foam container (MIL-P-19644). Each cell must be inserted into a close fitting slot. Slots to be arranged in a minimum area securing solar cells upright. The container should have a cover of the same material as bottom (unless it is transparent). The cover must hold parts in the slots. Containers must have provisions for nesting when stacked (Figure 2).

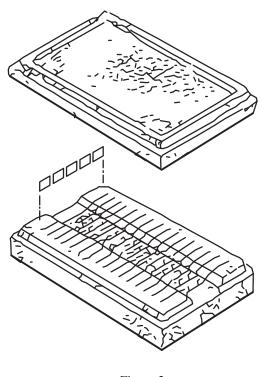


Figure 2. P10139–002

## **UNIT PACKAGE MARKING**

Label or mark each unit package to show at least supplier identity, nomenclature quantity and part number per contracting document.

#### **INTERMEDIATE PACKAGING**

Unit packages may be packed in an intermediate container. The style of intermediate container may be a fiberboard sleeve, folding carton, setup box or corrugated container. Gross weight should not be over 20 pounds for corrugated container and not over 10 pounds for others. Close container with tape or other suitable means.

## **PACKING**

Pack any number of unit packages or intermediate containers in a shipping container which conforms to carrier regulations. The closures and the gross weight of the filled container shall conform to both carrier regulations and container limitations. Place one copy of the shipping document in the shipping container or affix one copy, in a protective envelope, to the outside of the container. If the intermediate container complies with applicable carrier regulations, no additional shipping container is required.

#### **SHIPPING CONTAINER MARKING**

Label or mark each container to show part number per contracting document, the LMSC contracting document number, supplier, destination and quantity of parts.

#### **CRITERIA**

Packaging shall be accomplished in such a manner as to prevent physical damage to, or degradation of, the packaged solar cells during delivery to the using acitivity. It shall be the prerogative of LMSC to return damaged solar cells, at supplier's expense, where such damage is attributable to improper or inadequate packaging. Weights and cubes of unit, intermediate and shipping containers shall be held to practical minimums.

# **REFERENCE DATA**

PPP-B-566, Box, Folding, Paper Board (Design Only)

PPP-B-636, Boxes, Fiber (Design Only)

PPP-B-676, Boxes, Setup, Paper Board (Design Only)

Consolidated Freight Classification, Rule 41

LMSC Management Procedure 10.04–2, Packaging Standard (LAC-PAC)

LAC 1001, Protective Packaging and Handling, General Specifications for OD 14309, Protection of PMS Material During Fabrication, Assembly and Storage RV–S–0053, Protective Packaging and Handling, General Specification for LPS 40–001, General Requirements Specification

This standard forms a part of LMSC contracting documents, as applied. It provides detail support to the general concepts of LMSC Material's Handling and Packaging Standards, LAC 1001, RV–S–0053 and OD 14309, as applicable. This standard is authorized by LMSC Management Procedure 10.04–2. Details of Package constructions are as defined in LPS 40–001, General Requirements Specification.

Potential vendor for unit package: General Plastics Corporation

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