

PREPARED BY: DATE N.KATO FEB.20.1996 <i>N. Kato</i>	SHARP SHARP CORPORATION 282-1 HAJIKAMI,SHINJOCHO, KITAKATSURAGIGUN,NARA, 639-21 ,JAPAN SPECIFICATION	SPEC No. G4630
CHECKED BY: DATE M.ASAI FEB.20.1996 <i>M. Asai</i>		FILE No.
APPROVED BY: DATE K. NISHIDA FEB.20.1996 <i>K. Nishida</i>		ISSUE FEB.20.1996 PAGE 6 REPRESENTATIVE DIVISION ENGINEERING DEPT. PHOTOVOLTAICS DIV.

**SPECIFICATION FOR
SOLAR CELL
MODEL No. NE5101Y**

1. This specification sheets include the contents under the copyright of Sharp Corporation (" Sharp"). Please keep them with reasonable care as important information. Please don't reproduce or cause anyone reproduce them without Sharp's consent.

2. Please obey the instructions mentioned below for actual use of this cell.

(1) This cell is designed for general use solar modules.
Main applications of the modules using these cells are as follows.
Telemeter system, Microwave repeater station, Other telecommunication system (Terminal), Village electrification, Monument, Toy,etc.

(2) Please take proper steps in order to maintain reliability and safety, in case this cell is used for the uses mentioned below which require high reliability.
Unit concerning control and safety of a vehicle(air plane, train, automobile, etc.), Traffic signal, Road sign, Security system, Other safety system, etc.

(3) Please don't use for the uses mentioned below which require extremely high reliability.
Space equipment, Telecommunication system(Trunk),Nuclear control system, Medical system(relating to any fatal element),etc.

CUSTOMER ' S APPROVAL

DATE _____

BY _____

PRESENTED BY *H. Sawai*
H.SAWAI
Department General Manager of Engineering Dept.

I. Applications

This specification applies to the NE5101 Y solar cell.

2. Outline

Substrate	p type polycrystalline silicon
Structure	n+ / p / p+
Dimensions	Refer to the drawings SSE96056, SSE96057
Mass	less than 19 g

3. Specifications**3.1 Dimensions**

L1=126±2 mm , L2=126±2 mm

3.2 Electrical characteristics

Characteristic	Symbol	Min.	Typ.	Unit
Open circuit voltage	Voc		595	mV
Short circuit current	Isc		5.16	A
Maximum power	Pm	2.18	2.3	W

Conditions:

Irradiance =1000* 50W/m² calibrated using Sharp standard cell.

Light source = Xenon short arc lamp with AM1.5 Filter

Cell temperature = 25± 5°C

3.3 Absolute maximum ratings

Rating	Value	Unit
Operating temperature	-40 ~ +90	°C
Storage temperature	-40 ~ +90	°C

4. Incoming inspection

Incoming inspection for Sharp products are shown below.

4.1 Inspection

All of products shall be inspected.

Judgement criterions are as follows.

(1) Dimensions L1=126±2 mm , L2=126±2 mm

(2) Electrical characteristic Maximum power (rein) =2. 18 W

under the conditions of item 3.2

4.2 Disposal of rejected products

Object products judged as rejected products due to Sharp's responsibility in the incoming inspection by user may be able to be return to Sharp.

5. Packing

25 pcs. of products shall be put into a packing case as shown in SSE96058.

6. Notes**6.1 Handling**

Avoid the handlings mentioned below, because it causes degradation of electrical or soldering performance.

· Handling with bare hands.

“Contact with corrosive chemicals or gases.

“Scrubbing the products surface. etc

So handle products carefully with plastic tweezers.

Avoid twisting, dropping or picking the products and so on, because it causes breakage or crack.

6.2 Connecting

When this products are connected in series or parallel and exposed to sunlight, they produce high voltage and current. In such case, never touch the output wires with bare hands not to receive an electric shock.

Long time heating causes an electrode damage, so please make short the soldering time as far as possible.

« Recommendable soldering conditions »

Soldering heat time : 1~2 s

Soldering iron temperature : below 350°C.

Flux(if necessary) : non-corrosive mildly activated flux

(Remove flux completely after soldering
with alcohol and acetone.)

Never assemble this products with other kinds of solar cells, because it may cause the hot-spot problem.

6.3 Storage

Keep away products from corrosive chemicals or gases and keep them in a storage box filled up with pure nitrogen gas or clean dry air at 10~30°C.

6.4 Humidity resistance

This products have no humidity resistance.

So cover the products with glass, wetproof films and resin to perform a long term reliability.

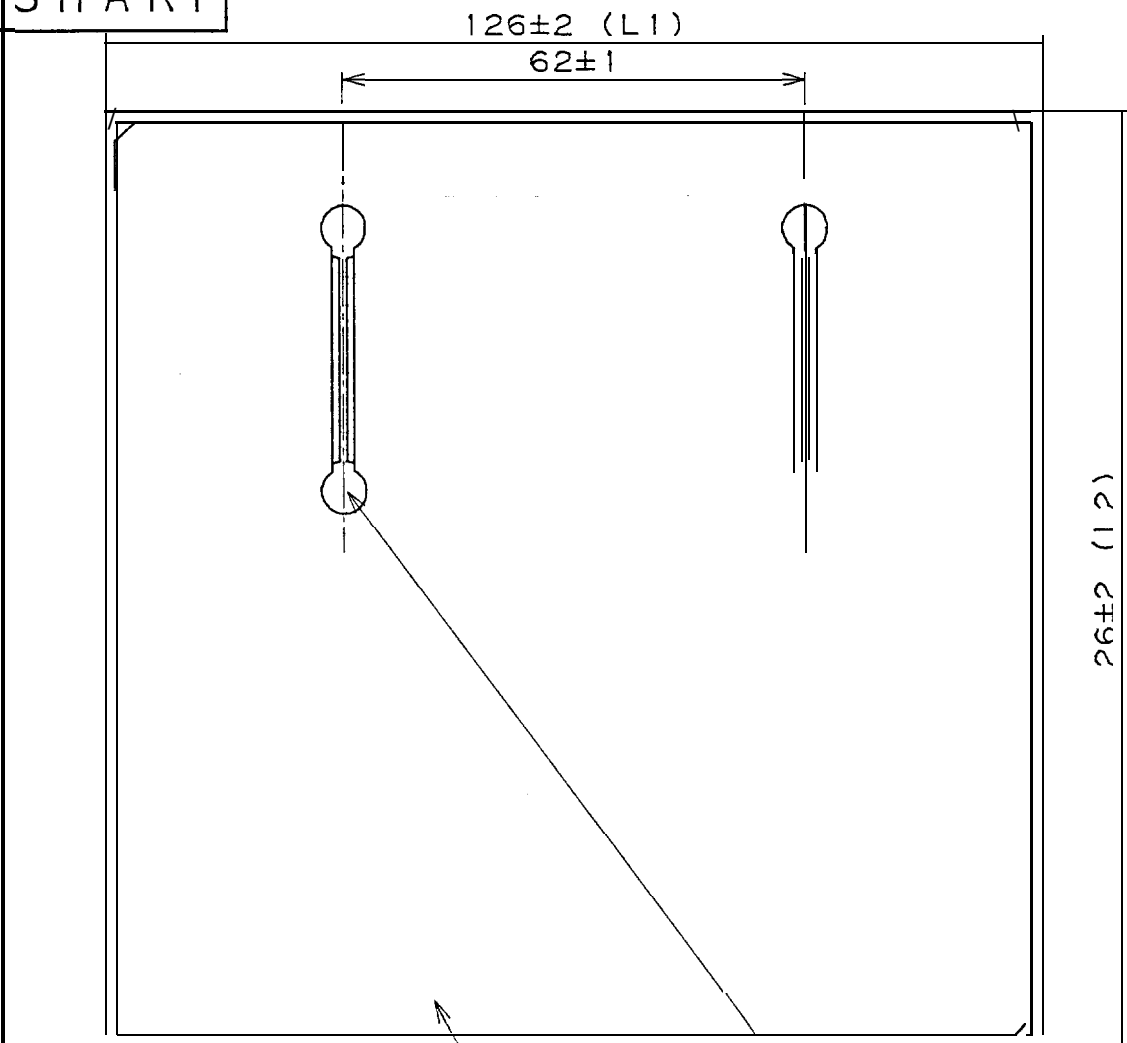
6.5 COCOM

This product is neither designed as radiation resistance nor for space use.

7. Other

Any doubt provided in the above or any troubles on testing shall be determined in good faith upon mutual consultation of the both parties ,however, in case of no consultation , the settlement shall be depend upon Sharp's judgement.

SHARP



ALUM NUM LAYER

P CONTACT
(-SOLDER COATED)

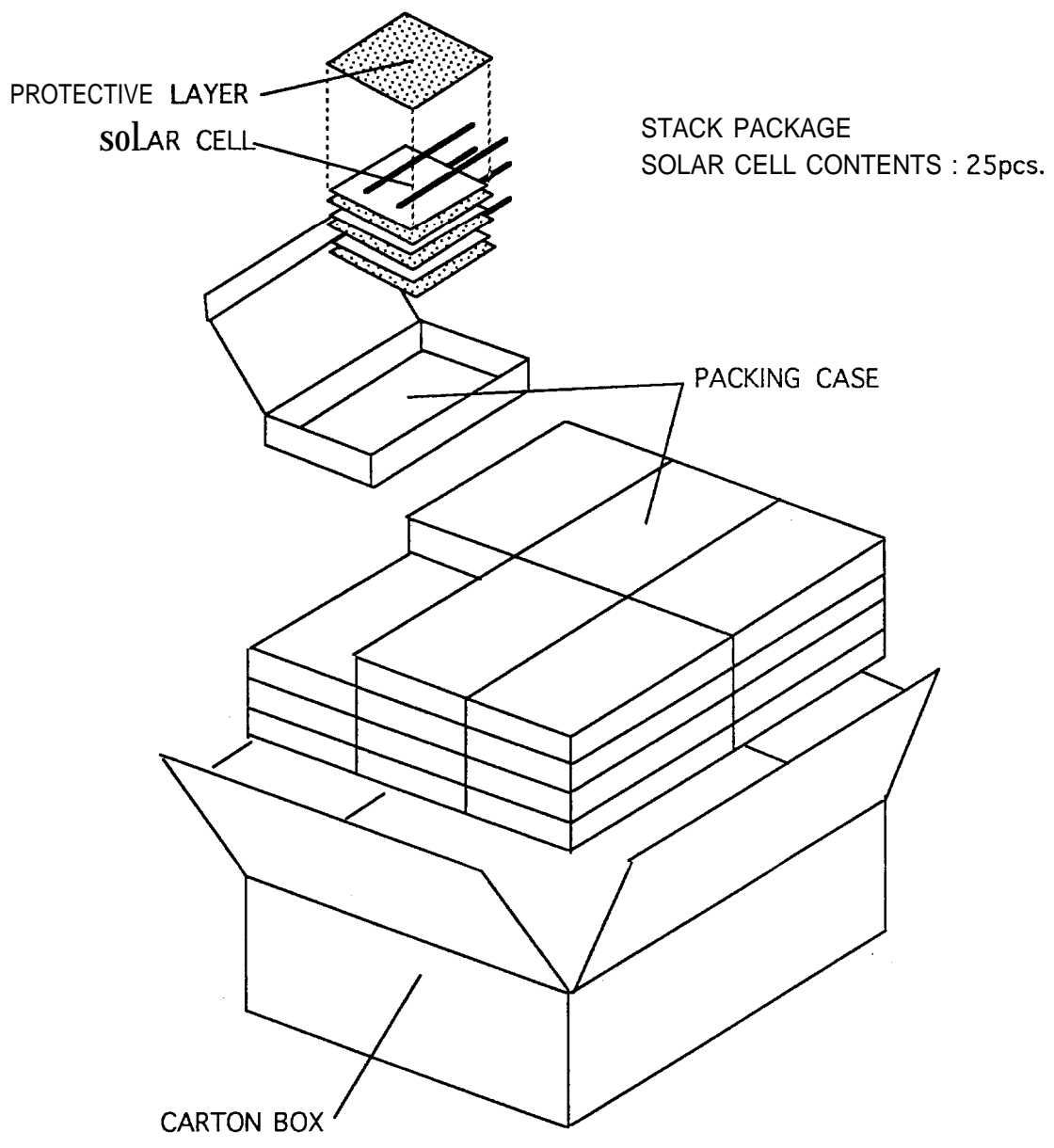
INTER-CONNECTOR

If necessary, contact shape will be modified without prior notice for Performance improvement.
(Modification not interfere with assembly.)

適用機種 APPLICABLE MODEL		尺度 SCALE	単位 UNIT	△			
			mm	△			
反厚 THICKNESS	員数 PIECES	材質 MATERIAL	仕上 FINISH	改訂日 DATE	改訂記事 REVISE	担当 CHARG	
日付 DATE	FEB. 20. 1996			名称 NAME	Rear View		
設計 DRAW	描図 TRACE	検図 CHECK	承認 APPROVE	コード CODE			
M. Oishi	M. Oishi			シャープ株式会社 電子部品事業本部			
				図番 DRAWING No.	SIS E1916101517		
SHARP CORPORATION							



THIS DRAWING WILL BE SUBJECT TO MODIFICATION WITHOUT PRIOR NOTICE FOR PERFORMANCE IMPROVEMENT.



SCALE		UNIT		FINISH/MATERIAL		NAME	
DATE		FEB.20.1 996				PACKAGE CASE	
						OUTLINE	
DESIGN	DRAW	CHECK	APPROVE			DRAWING No	
<i>M. Osai</i>	<i>M. Osai</i>		<i>K. Nishida</i>			SSE96058	
				SHARP CORPORATION		REVISE	
				PHOTOVOLTAICS DIVISION			