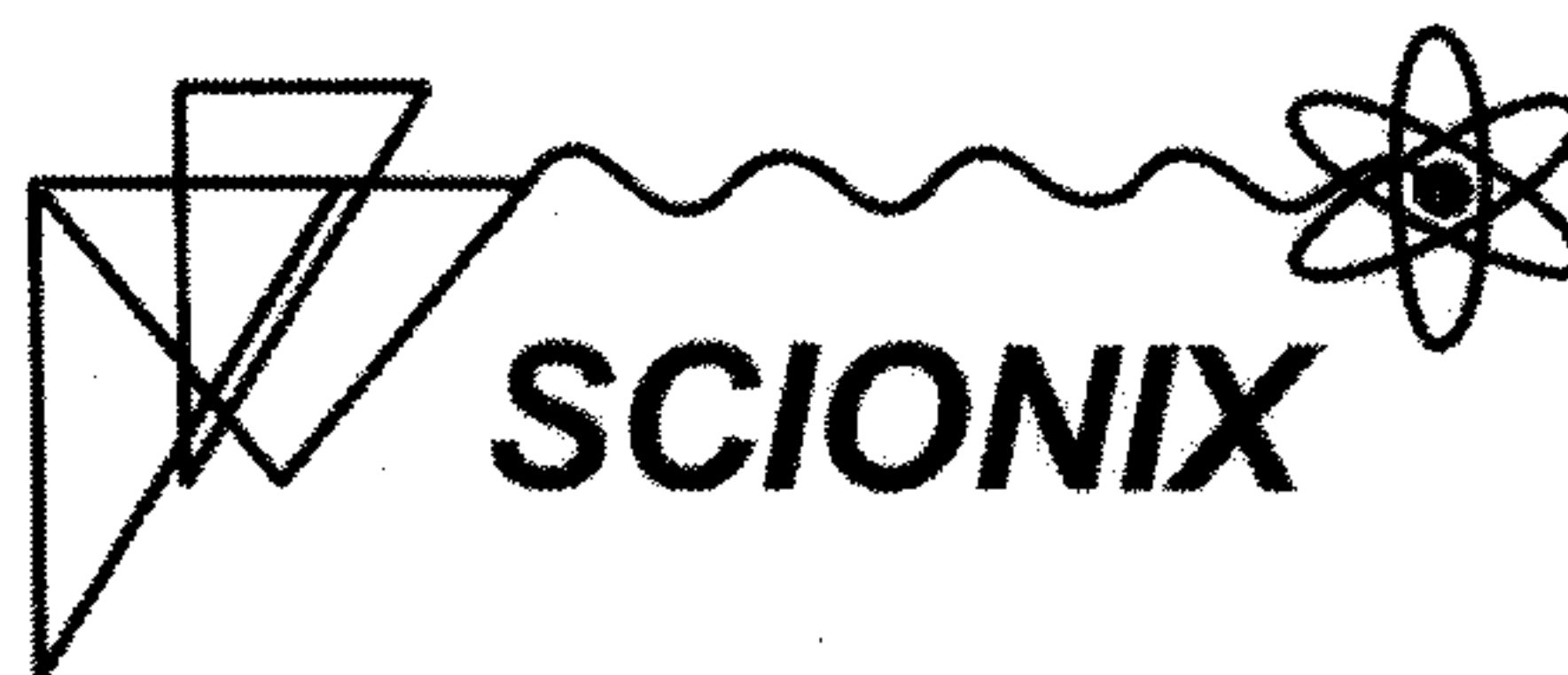


CATE-GSI(7C) *de Klerk*
NEW: 27.05.2003

SCIONIX HOLLAND BV
Dedicated Scintillation Detectors

P.O. Box 143
3980 CC Bunnik
The Netherlands
Tel. 31 (0)30 657 0312
Fax. 31 (0)30 656 7563



Dedicated
Scintillation detectors

E-mail : SCIONIX@wxs.nl
Web. <http://www.scionix.nl>

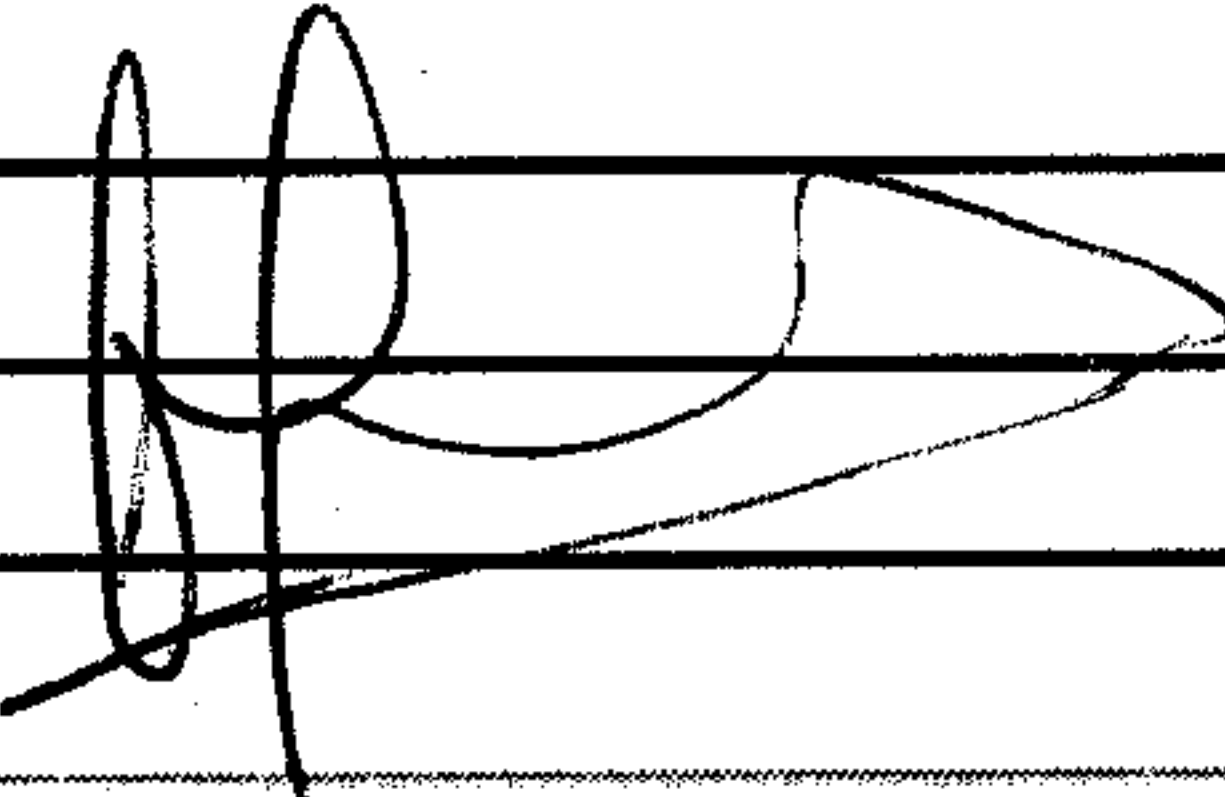
ENGINEERING Note 03.05.002

**Subject : CsI(Tl) Scintillator Photodiode Detectors
V25PM25/18M-E2-Cs-X for GSI**

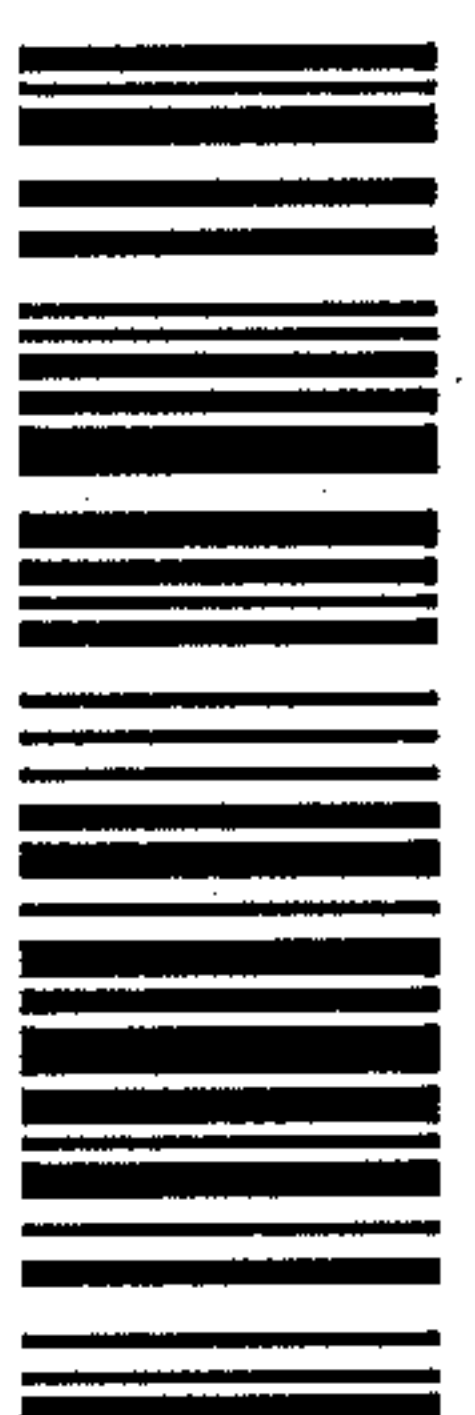
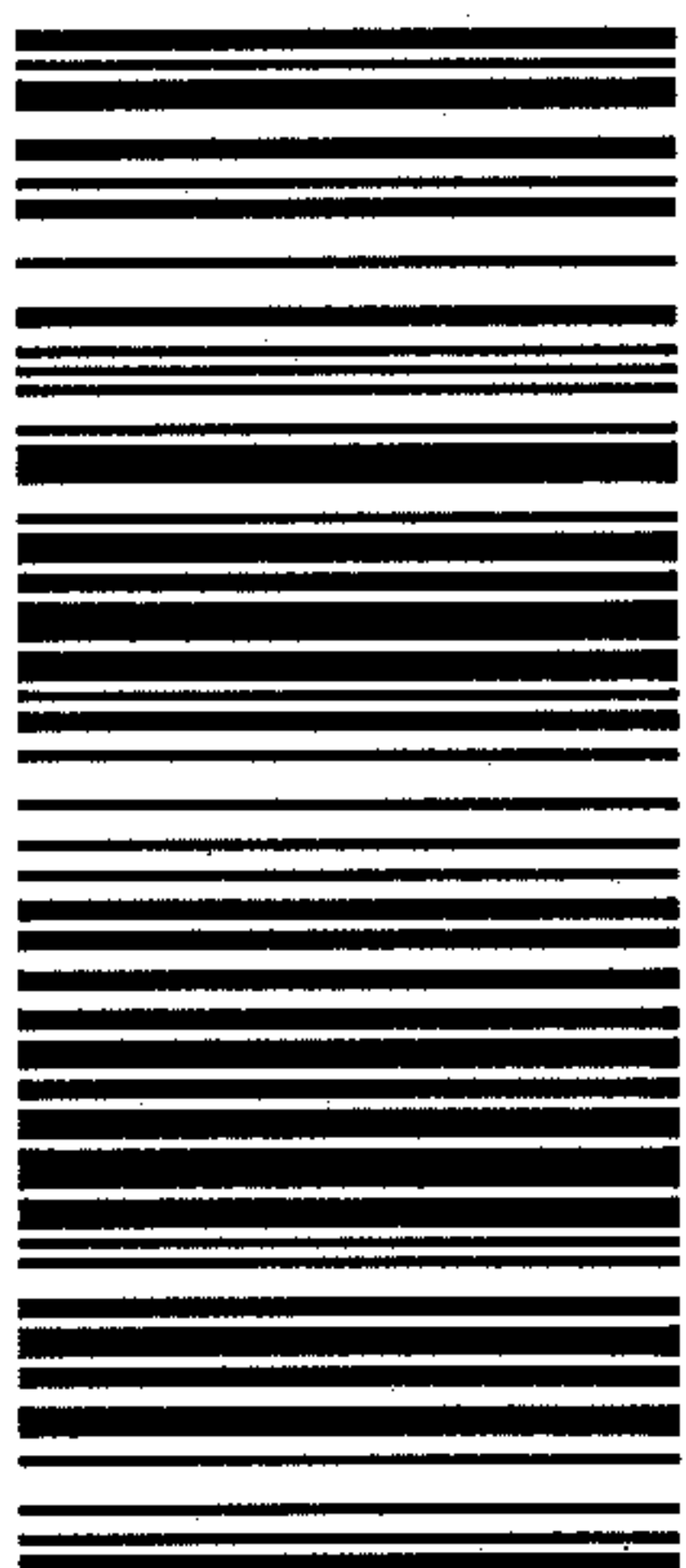
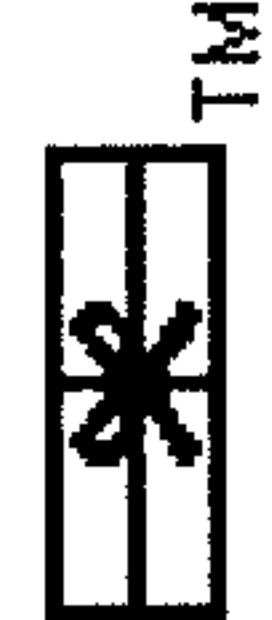
- 1. Handling and Unpacking Instructions**
- 2. Specific Features**
- 3. Operation Instructions**
- 4. Calibration Results**

UPS Internet Shipping: Etiket bekijken/printen

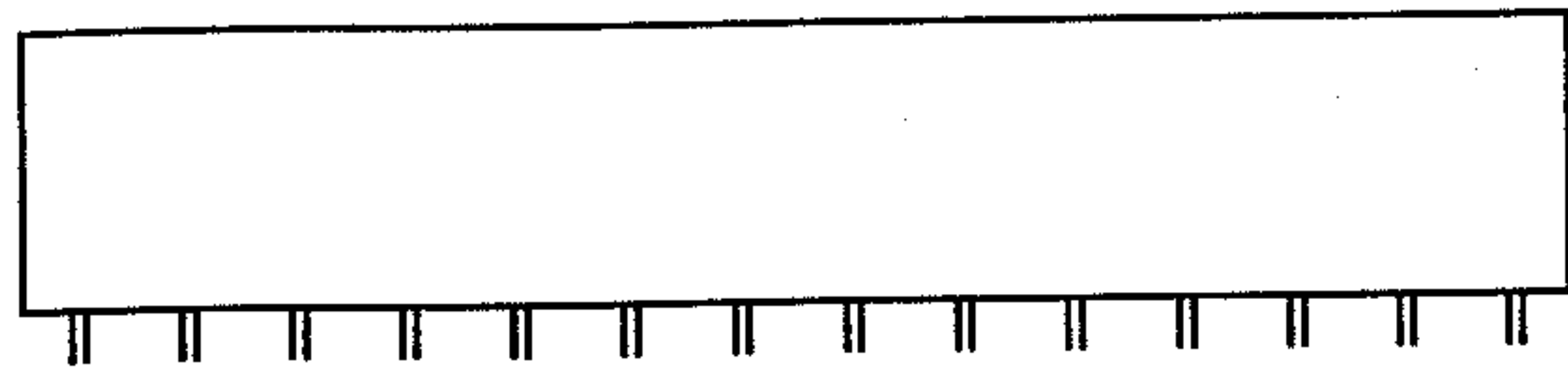
- Print het etiket:** Kies Printen in het menu Bestand van dit browservenster om het onderstaande etiket te printen.
- Vouw het etiket bij de stippellijn.** Plaats het etiket in een UPS Shipping pouch. Als u geen hoesje hebt, plakt u het gevouwen etiket met doorzichtig plakband over de gehele etiket.
- Afhalen en Afgeven:**
Om het afhalen af te spreken of de afleveringslocatie te zoeken, kiest u de icon Afhalen of Afgeven in de UPS toolbar.
Klanten met dagelijkse afhaalservice: Zorg dat uw zendingen op de normale manier gereed liggen voor de chauffeur.
- Om aan te geven dat u de oorspronkelijke taalversie van de overeenkomst met UPS zoals vermeld op de pagina met de betalingsbevestiging accepteert en om UPS te machtigen als expediteur voor exportdoeleinden, ondertekent u hier u vult u de datum in:

Handtekening van verzender	Datum van zending
	26-05-03

HIER VOUWEN

<p>1 OF 1</p> <p>ARDY GROEN 030 6570312 SCIONIX HOLLAND BV REGULIERENRING 3 3981LA BUNNIK NETHERLANDS</p> <p>SHIP TO: J. GERL 06159710 GSI PLANCKSTRASSE 1 64291 DARMSTADT GERMANY</p>	<p>SHP#: 2302 09VT BWR SHP WT: 4 KG SHP DWT: 6.5 KG DATE: 26 MAY 2003</p>	<p>DEU 063 9-00</p> 	<p>UPS STANDARD</p> <p>TRACKING #: 1Z 230 209 68 9951 9863</p> 	<p>BILLING: P/P</p> <p>EDI</p> 	<p>Referentienr. 1.: GSI 03.2681</p> <p>UJS 05.02.48 W00IES 22.0A 04/2003</p> <p><small>Kennisgeving Internationale Zending - Op vervoer onder deze voorwaarden zijn van toepassing de regulering met betrekking tot aansprakelijkheid en andere voorwaarden vastgelegd in de Convention for the Unification of Certain Rules Relating to International Carriage by Air (het Verdrag van Warschau) en/of de Convention on the Contract for International Carriage of Goods by Road (het CMR-verdrag). Deze goederen, technologie of software zijn uitgevoerd vanuit de V.S. in overeenstemming met de Export Administration Regulations. Afwijking in strijd met de Amerikaanse Wet is verboden. Voor stopplaatsen belt u 0800 099 1300. United Parcel Service, Louisville, KY</small></p>
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Flat cable numbering sequence with cable emerging downward (see drawing above).



Flat cable attached in connector and seen from above.

14 1 13 2 12 3 11 4 10 5 9 6 8 7

The numbers 14,2,12,3,11,10,9,6,7 can be connected all together to a common ground. Make sure the power ground is connected directly to this same point.

3. Operation Instructions

1. The entrance window and the sides of the photodiode are not light-tight. The detector should therefore be operated in the total dark (inside a testbox or vessel).

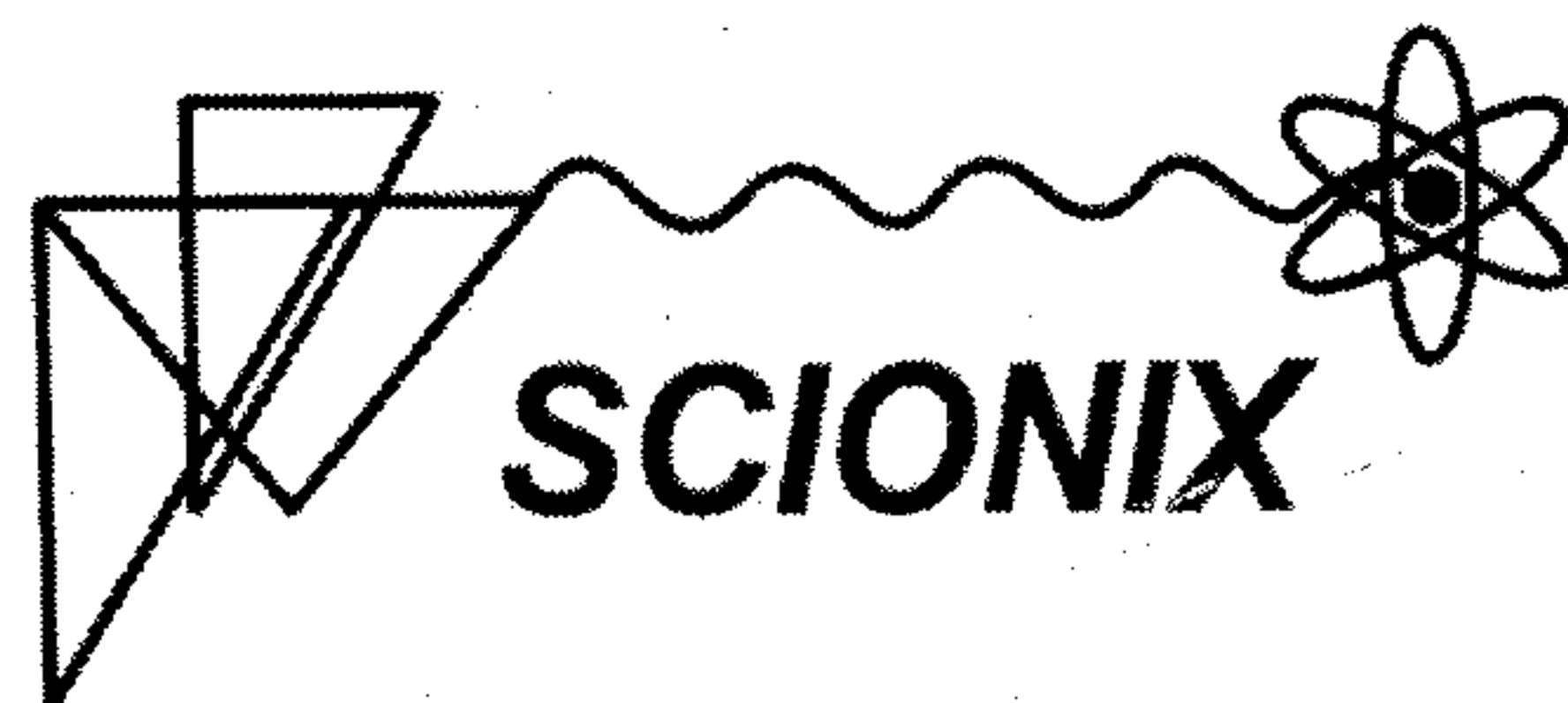
2. Since the electronics are unshielded, a metal shield around the detector (e.g. a vacuum vessel or testbox) is necessary to ensure proper working conditions.

3. Because of the large scintillation decay time of CsI(Tl), a shaping time of the main amplifier of at least 4 microseconds is advised. For charged particles, this requirement may be a bit relaxed.

6. The overall detector performance depends very strongly on the noise pickup by the system from external sources. Advised is to keep the distance between the detector units and the main amplifiers as short as possible. Avoid ground loops.

ENG535.DOC

22-05-2003



Dedicated
Scintillation detectors

Handling and Unpacking Instructions

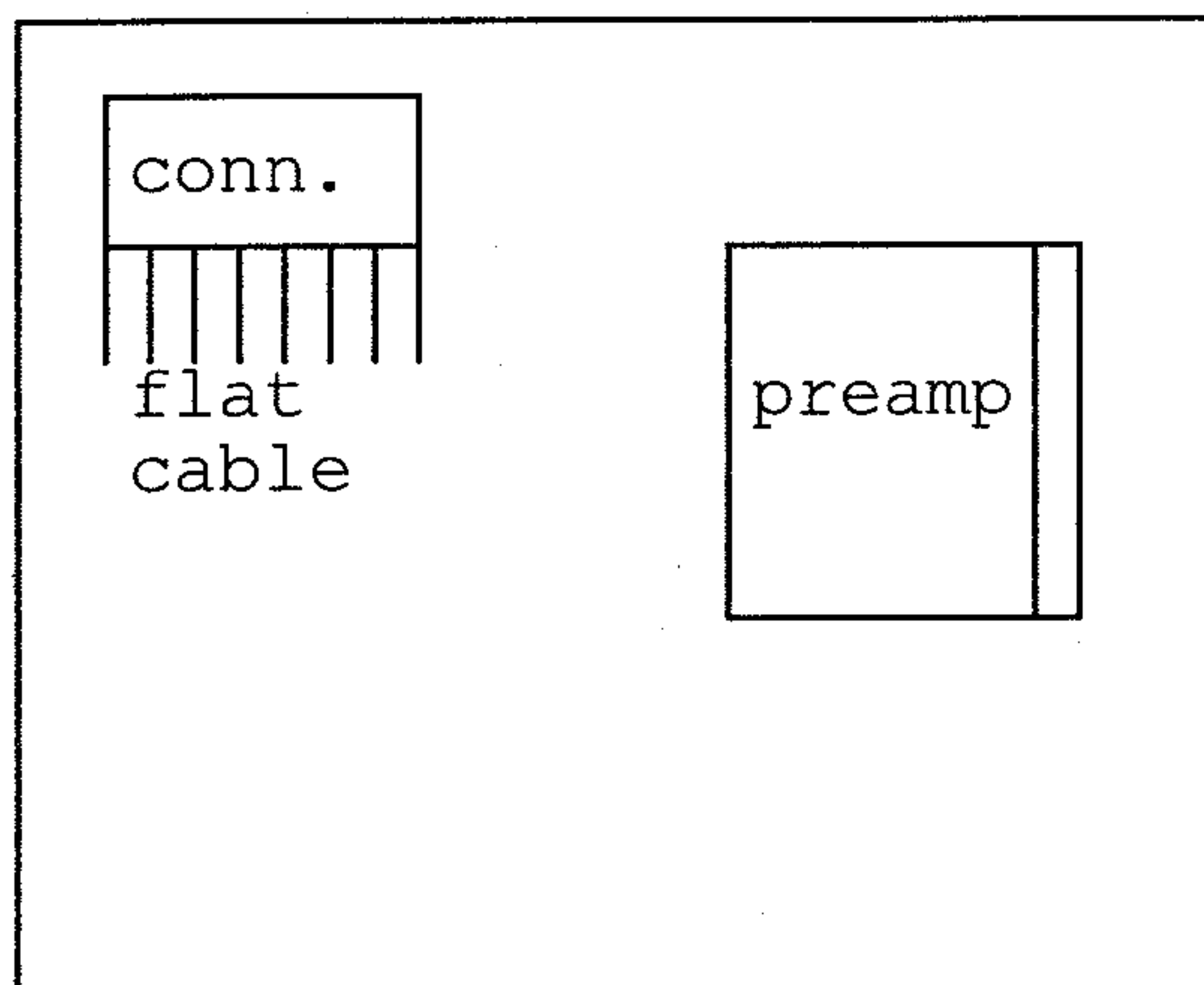
Unpacking of the detector units should be performed in a (moderate) clean environment since the detector units are not canned in a metal housing. Gentle handling is required. Avoid to touch the 6 micrometer thin aluminised mylar entrance foil; it is very easily damaged.

It is advisable to handle the detector units by taking them at the **sides** of the crystal at the aluminised mylar wrapping. In this way the weight of the crystal does not give any strain on the optical interface. Although the bond between crystal and photodiode is quite strong it is **not** advised to make rapid movements while handling the detector units by taking them at the sides of the electronic print. Also when attaching flat cables, take care that the printed circuit board frame is supported to prevent damage to the units.

2. Specific Features

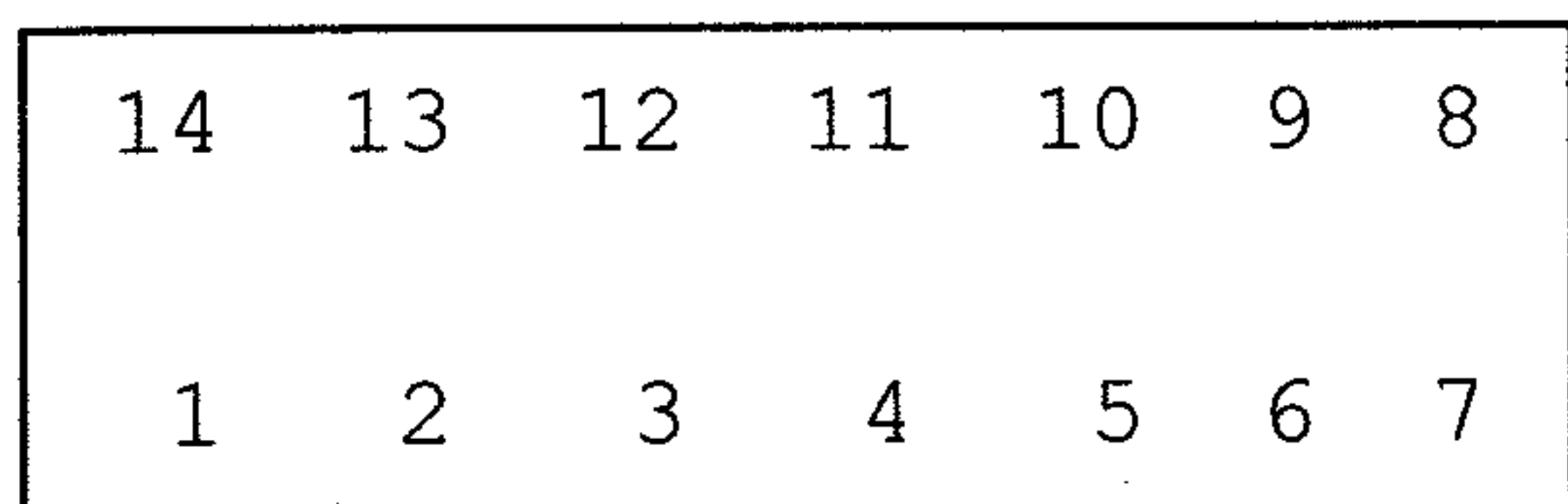
A. Connection layout on the detector units.

Flat cable connector on PC-board:



(unit seen from above)

Cable core numbering flat cable connector:
(mounted as shown above with wires emerging downward)



- | | |
|------------|------------------------|
| 1 - + 30 V | 8 - output |
| 2 - n.c. | 9 - ground |
| 3 - n.c. | 10 - ground |
| 4 - + 12 V | 11 - ground |
| 5 - - 12 V | 12 - ground |
| 6 - n.c. | 13 - calibration input |
| 7 - n.c. | 14 - n.c. |

NOTE : The + en - connections are adapted to the amplifier
Amplifier requirements of the user