Luminescence Technology Corp.

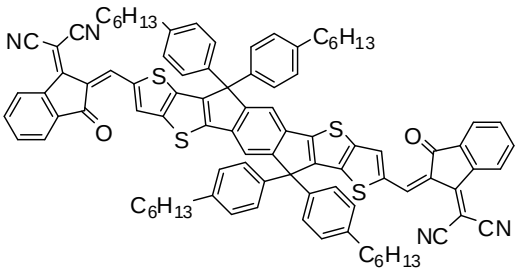
Fullerene-Free Polymer Solar Cells with over 11% Efficiency and Excellent Thermal Stability

Product Specifications

LT-S9212 ITIC

Name. 3,9-Bis(2-methylene-(3-(1,1-dicyanomethylene)-indanone))-5,5,11,11-tetrakis(4-hexylphenyl)-dithieno[2,3-d:2',3'-d']-s-indaceno[1,2-b:5,6-b']dithiophene)

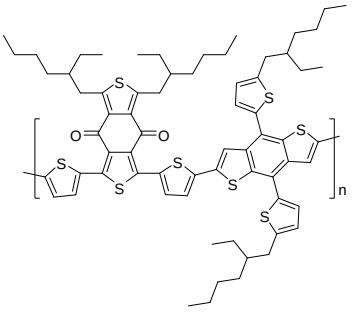
CAS No.	1664293-06-4
Grade	>98 %
Formula	$C_{94}H_{82}N_4O_2S_4$
Molecular Weight	1427.94 g/mole
HOMO/LUMO	-5.51 eV/ -3.78 eV



LT-S9273 PBDB-T

Name. **poly[(2,6-(4,8-bis(5-(2-ethylhexyl)thiophen-2-yl)-benzo[1,2-b:4,5-b']dithiophene))-alt-(5,5-(1',3'-di-2-thienyl-5',7'-bis(2-ethylhexyl)benzo[1',2'-c:4',5'-c']dithiophene-4,8-dione))]**

CAS No.	1415929-80-4
Grade	M_w > 10,000 (GPC)
Formula	$(C_{68}H_{78}O_2S_8)_n$
HOMO/LUMO	-5.33 eV/ -2.92 eV



Reference: *Adv. Mater.* ***2016****, 28, 4734-4739*

Features

- The PBDB-T:ITIC blend shows a much broader absorption band and a more appropriate molecular energy level alignment.
- The PBDB-T:ITIC based PSCs show outstanding PCEs of up to 11.21% with excellent thermal stability, an efficiency of 10.78% was certified based on PBDB-T:ITIC device and this is the highest value for all types of PSCs (polymer solar cells).

Device Application

The Device(ITIC):

ITO/ ZnO/ PBDB-T:ITIC/ MoO_3/ Al.

MoO_3 = LT-E003 Al = LT-E005

Materials are used by qualified for testing and research only, there are not guaranteed in patent contention by customer use.

Head office : 31F-5, No. 99, Sec. 1, Xintai 5th Rd., Xizhi, New Taipei City 22175, Taiwan, R.O.C., TEL：+886-2-2697-5600, FAX：+886-2-2697-5601.
Factory I : 2F, No. 21, R&D Road II, Science-Based Industrial Park, Hsin-Chu 30076, Taiwan, R.O.C., TEL：+886-3-666-3188, FAX：+886-3-666-9288.
總公司 :22175 新北市汐止區新台五路一段 99 號 31 樓之 5, TEL：02-2697-5600, FAX：02-2697-5601.
新竹廠 :30076 新竹科學工業園區研發二路 17 號 2 樓, TEL：03-666-3188, FAX：03-666-9288.
E-mail : sales@lumtec.com.tw；Web : http://www.lumtec.com.tw