



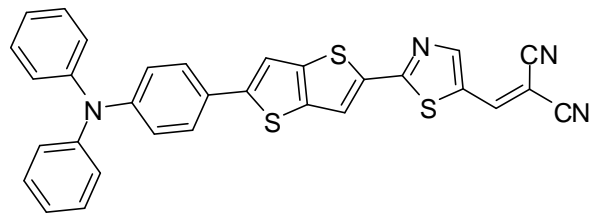
Luminescence Technology Corp.

Efficient Vacuum-Deposited Ternary Organic Solar Cells with Broad Absorption, Energy Transfer, and Enhanced Hole Mobility

Product Specifications

LT-S9203 DTTz

Name	2-((2-(5-(4-(diphenylamino)phenyl)thieno[3,2-b]thiophen-2-yl)thiazol-5-yl)methylene)malononitrile
CAS No.	1610050-61-7
Formula	$C_{31}H_{18}N_4S_3$
Molecular Weight	542.7 g/mole
Photoluminescence	780 nm (in CH_2Cl_2)
HOMO/LUMO	-5.57 eV/ -3.58 eV



* Reference: *ACS. Appl. Mater. Interfaces* **2016**, *8*, 1214–1219

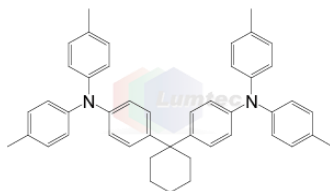
Features

- The device performance in vacuum-deposited ternary OPVs as compared to binary devices. A PCE of 8.02% was achieved, which is 23% higher than that of binary devices.
- The DTTz satisfies all the requirements for efficient ternary OPVs. This system demonstrates the possibility of enhancing device performance by using vacuum deposition.

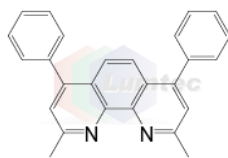
Device Application

The Device:

ITO/TAPC:MoO₃(20 nm)/TAPC(3 nm)/DTDCTB(5 nm)/active layer(50 nm)/C₇₀(5 nm)/bathocuproine (BCP):C₆₀(5 nm)/BCP(5 nm)/Ag.



LT-N137 TAPC



LT-E304 BCP



LT-S903 C₆₀



LT-S967 C₇₀



LT-E003 MoO₃

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