Lumtec Luminescence Technology Corp.

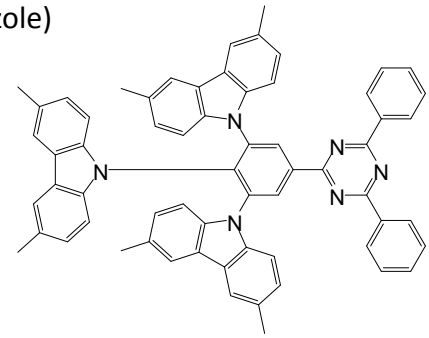
Design Strategy for 25% EQE in Green and Blue TADF devices

Product Specifications

LT-N548 TmCzTrz

9,9',9''-(5-(4,6-diphenyl-1,3,5-triazin-2-yl)benzene-1,2,3-triyl) tris(3,6-dimethyl-9*H*-carbazole)

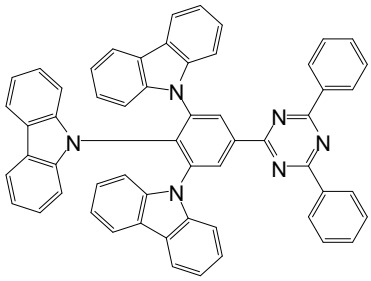
CAS No.	1808158-41-9
Grade	Sublimed, >99% (HPLC)
Formula	$C_{63}H_{48}N_6$
Molecular Weight	889.10 g/mole
UV absorption	447 nm
HOMO/LUMO	-5.19 eV/-2.11 eV
Triplet Energy	2.79 eV



LT-N696 TCzTrz

9,9',9''-(5-(4,6-diphenyl-1,3,5-triazin-2-yl)benzene-1,2,3-triyl) tris(9*H*-carbazole)

CAS No.	1808158-40-8
Grade	Sublimed, >99% (HPLC)
Formula	$C_{57}H_{36}N_6$
Molecular Weight	804.94 g/mole
UV absorption	414 nm
HOMO/LUMO	-5.40 eV/-2.18 eV
Triplet Energy	2.80 eV



Reference : ACS Appl. Mater. Interfaces 2015, 7, 9625–9629

Features

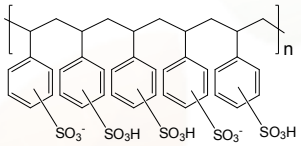
- The TmCzTrz and TCzTrz design approach to realize high EQE in the TADF devices by increasing the number of donor units and dispersing the HOMO evenly over the donor units were effective to obtain high PL quantum yield close to 100% and high EQE above 25% in the green and blue TADF OLEDs.

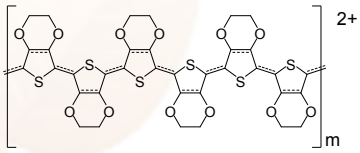
Device Application

The Green and Blue Device:

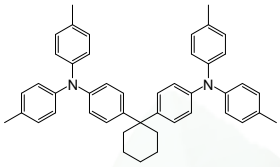
ITO/ PEDOT:PSS (60 nm)/ TAPC (20 nm)/ MCP (10 nm)/ DPEPO:TADF emitter (25 nm)/ TSPO1 (5 nm)/ TPBi (20 nm)/ LiF (1 nm)/ Al (200 nm).

Related products from Lumtec :

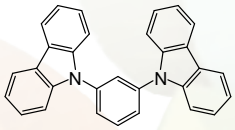




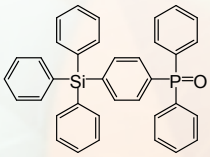
LT-PS001 PEDOT:PSS



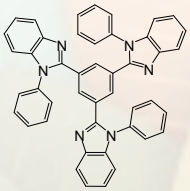
LT-N137 TAPC



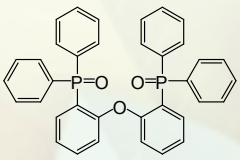
LT-E107 MCP



LT-N4048 TSPO1



LT-E302 TPBi



LT-N4060 DPEPO

Our products are used for testing and research purpose; they are not guaranteed in patent contention by customer use.

Address: 2F, No. 17, 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.
E-mail : sales@lumtec.com.tw ; Web : http://www.lumtec.com.tw