



New Dendritic Host Material for Solution-Processed Single Emissive Layer White Organic Light Emitting Diodes

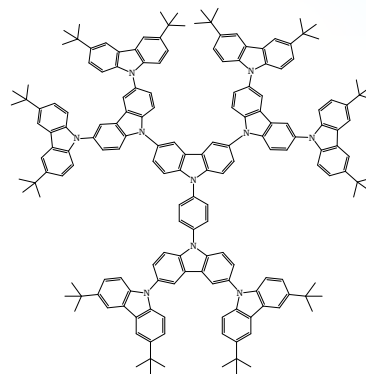
Product Specifications

LT-N4041 G3-*t*-Cbz

Formula	$C_{174}H_{172}N_{10}$
Grade	2403.29 g/mole
Emission	402 nm (in CH_2Cl_2)
HOMO (eV)	-5.1 eV
LUMO (eV)	-1.9 eV
E_T (eV)	2.89 eV

Reference : 1. Adv. Mater. 2012, 24, 1873–1877

2. Adv. Mater. 2009, 21, 4983–4986



Features

- Novel solution-processable carbazole-based conjugated dendrimer have been designed, by increasing the dendron generation, the HOMO level shifts to higher energy to facilitate the efficient hole injection.
- The efficiency up to 15.4 lm/W (27.6 cd/A, 12.7%), which is 86% higher than that of PVK, when blue-electrophosphorescent devices with G3-*t*-Cbz as the host and 10 wt% Flrpic as the dopant were fabricated.
- High-performance solution-processed WOLEDs with a $\eta_{p,max}$ of 47.6 lm/W (70.6 cd/A), an external quantum efficiency(EQE) of 26.0%, and the CIE chromaticity diagram (x, y) of (0.383, 0.432) was collected based on G3-*t*-Cbz as host material.

Device Application

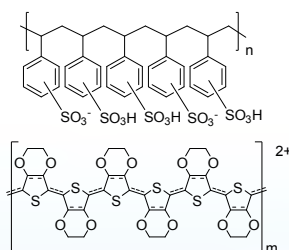
Blue-PHOLED :

ITO/PEDOT:PSS/G3-*t*-Cbz : 10 wt% Flrpic(40 nm)/TAZ(50 nm)/LiF(1 nm)/Al

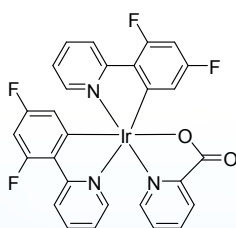
Solution-Processed WOLED :

ITO/PEDOT:PSS(50 nm)/G3-*t*-Cbz : Flrpic or Ir(Flpy- CF_3)₃(40 nm)/SPPO13(50 nm)/LiF(1 nm)/Al

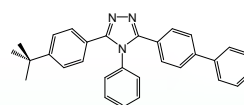
Related products from Lumtec :



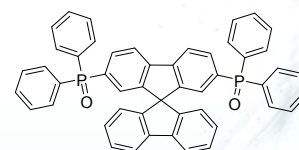
LT-PS001 PEDOT:PSS



LT-E607 Flrpic



LT-S947 SubNc



LT-N4015 SPPO13