

Life Cycle Assessment for Display Products

● Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its displays. The most recent life cycle assessment (LCA) has been for the Samsung Display. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase.

To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used Simapro7 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material (BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 12 potential environment impact categories including; global warming; abiotic depletion; Water consumption; eutrophication; Primary energy demand and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

● Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML 2001 as provided in the SimaPro.
LCA software	SimaPro 9.3

● System boundary of LCA

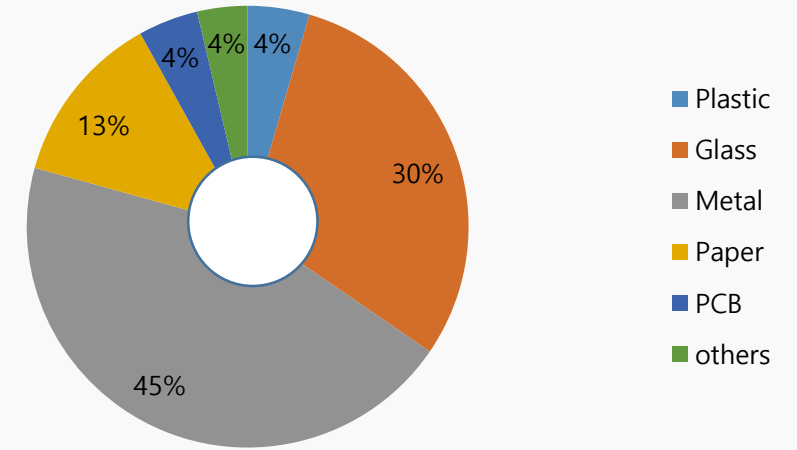
Pre-manufacturing	Parts and materials constituting the products
Manufacturing	Product assembly by Samsung Electronics (Data collection from 3 Plants)
Distribution	From Mexico/Vietnam/China to America, Europe and Asia countries
Usage	4 years use
Disposal	Waste treatment of parts and material

● Product Features



Model name	LS27B80*****
Screen Size	27 inch
Resolution	4k UHD (3840*2160)
Brightness	350 nit
Viewing Angle	178/178
Power Supply	AC 100 - 240 V, 50/60 Hz
Wt.(kg)	6.7 (Package 8.4)

● Material Use



● Characterized Environment Impact

