



Websites

NEC's new & 'under development'

NEC Compound Semiconductor's compound devices are getting an increasing amount of space on its website at <http://www.ncsd.necel.com/opto/index.html>

In the opto sector is a slew of new products, from the smallest 10Gbps optical modules and a 10Gbps directly modulated laser module using SMT package, to the MS Agreement standards for 10Gbps 1.55 μ m laser modules incorporating a driver IC, to high speed laser diode modules with built in wavelength monitor, and 3 laser diode modules for CWDM long distance transmission at wide temperature ranges.

New opto products include a high linear analog photocoupler PS8741 (an optically coupled isolator with GaAs LED and 2 photo-diodes on the output) and the IPM Photocoupler PS9613 (an optically coupled isolator with a GaAlAs LED on the input and a photo diode and sign processing circuit on the output). See http://www.ncsd.necel.com/opto/english/new_product.html

On the RF and microwave side [<http://www.ncsd.necel.com/microwave/index.html>], world-first SPICE parameter design kits are available.

On offer the provision of S-parameters, Noise parameters, and SPICE parameters in a form (S2P/2G6) that enables direct import to a microwave circuit simulator without keyboard input.

Most intriguing are the "Under development products" at <http://www.ncsd.necel.com/microwave/english/development.html>

Here a very telling caveat (that is not to be found in the opto sector) is that "The information described here is subject to change without notice. Product development may be stopped." That says reams about industry uncertainty.

In the RF and microwave 'under development' are three devices: NE350184C [284C and 4S02] GaAs HJ-FETs, NES1823S-45 a PHS base station in GaAs HPA, and a VCO buffer NESG204619 that is SiGe HBT.

From this it must be presumed that for NEC business 'under development' is of sufficient value to clients and potential clients to outweigh any potential threat perceived from the competition.

III-V nanodot memory device and more



Deep Submicron high-frequency transistor fabrication using Raith + Jeol direct electron beam writing

Nanyang Technological University, Singapore, has a really crowded page at <http://www.ntu.edu.sg/eee/eee6/iii-v/mec.htm>, which focuses on its key technologies of III-V compound semiconductor materials and devices, diamond films and diamond-like carbon films, sensors and actuators, photonics, silicon processes and devices, and integrated circuit technology.

On going project research can be found at <http://www.ntu.edu.sg/eee/eee6/iii-v/project.htm> and covers:

- Microwave & millimeter-wave MEMS for automatic identification and tracking

- Development of power MMICs, MMIC process and product development and metamorphic InP-HBT technology
- Monolithic integration of HBTs and high electron mobility transistors prototyping MMICs using NTU local foundry
- Development of high power semiconductor laser diode technology based on MBE
- Monolithic integration of III-V heterostructures using selective area epitaxy (in collaboration with Prof Clifton Fonstad of MIT)
- Nanodot memory device based on III-V compound semiconductor technology
- III-V compound semiconductor materials and device research using MBE
- Development of electron beam lithography process for the design and fabrication of submicron GaAs-based RF devices
- Development of deep submicron HEMT MMICs for millimeter-wave applications
- Characterisation of compound semiconductor for quantum well infrared photodetectors.

Researchers and the funding amounts for the different projects are also given.