

## TC Interconnect

### Setting up a JV to tap into high-voltage LED lighting market

TC Interconnect (TCI), a PCB manufacturer located in Zhongshan, entered into a non-binding MOU with Orient Opto-Semiconductors Corp. (OOS) in Sep 09 to set up a 70:30 JV to carry out high-voltage LED lighting business. Regard this movement, our preliminary research shows:

- The Ministry of Science and Technology Government set goal to install total 3m LED lamps nationwide by 2012.
- Contractor-government-bank model allows local governments pay LED projects by using saved electricity bills later on, which may largely accelerate their accepting and adopting LED technology.
- Synergy is emerging between TCI (PCB know-how, manufacturing facilities and listing status) and OOS (LED technology and associated experience).
- The JV has secured contracts for 55,000 street lamps, 40,000 of which will be delivered in 2010.
- The JV can possibly earn RMB14.6m and RMB22.7m, respectively, in FY12/10F and FY12/11F, translating into HK\$10.2m and HK\$15.9m net profit contribution to TCI.
- An undemanding 15.0x FY12/10F P/E valuation gives the JV a market value of HK\$340.5m. HK\$238.3m belongs to the listco, versus its HK\$170.4m increase in market capitalization since announcement of the JV agreement.

**China targets on 3m LED lamps in 4 years.** According to the "Thousands Lamps in Ten Cities" released by the Ministry of Science and Technology in 2009, China will push application of LED lighting technology nationwide in three stages.

- 2009: 1m LED lamps should be installed in 21 pilot cities in public works, such as street, tunnel, subway, etc. 60% of the lighting devices / components are made domestically. Annual energy saving is estimated at 220m KWh.
- 2010-2012: trial will expand into 50 cities and the scale will enlarge to 2m lamps. Component localization ratio will rise to 70%. Annual energy saving will be 1,000 KWh.
- 2013-2015: LED technology will be brought into general lighting area and account for 30% of the entire market, reducing 140b KWh electricity consumption each year.

**Tri-Party model to accelerate application.** Despite the 1m target, LEDInsight's estimate shows only ~130,000 LED street lamps were installed in 2009 by the 21 cities. We reckon the delay should be associated with local governments' decision-making and budgeting process, especially the latter. Notwithstanding, this situation may change this year as a contractor-bank-local government model has been developed in Guangdong, under which,

- Contractor is responsible for installation and maintenance of LED lamps, absorbing all costs.
- Banks provide necessary financial support.
- Local government offers subsidy at the beginning to cover only interest expenses on bank loans. It will then pay the contractor back in instalments within a certain period (~5 years) by using saved electricity bills.

Obviously, by shifting initial investment to the contractor side, this model can largely reduce the local government's concern and pressure on financial budgeting, encouraging it move more quickly in employing LED technology. Thus, we reckon the market will accelerate in 2010.

**JV under establishment with experienced partner.** OOS was founded early in 2003 and engaged in developing, manufacturing, packaging and installing LED

| Ticker                 | 0515 HK   |
|------------------------|-----------|
| Rating                 | Not Rated |
| Price (HK\$)           | 1.41      |
| Target Price (HK\$)    | n.a.      |
| 12m Price Range (HK\$) | 0.26-1.78 |
| Market cap. (US\$m)    | 43.4      |
| Daily t/o (US\$m)      | 0.5       |
| Free float (%)         | 16.2      |

#### Financial summary

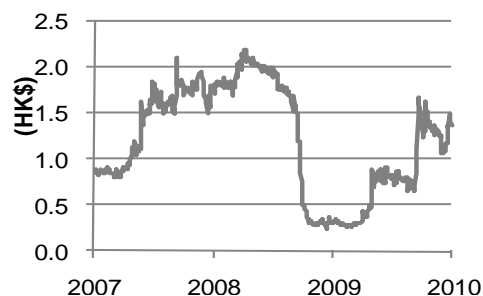
| Year to Dec        | 06A   | 07A   | 08A   |
|--------------------|-------|-------|-------|
| Turnover (HK\$m)   | 613.2 | 741.0 | 838.9 |
| Net Profit (HK\$m) | 39.1  | 60.0  | 27.7  |
| EPS (HK\$)         | 0.180 | 0.250 | 0.120 |
| P/E (x)            | 7.8   | 5.6   | 11.8  |
| P/B (x)            | 1.40  | 1.10  | 1.01  |
| EV/EBITDA (x)      | 5.7   | 4.0   | 4.8   |
| Yield (%)          | 0.7   | 0.9   | 1.1   |
| ROE (%)            | 16.2  | 21.8  | 8.6   |
| ROCE (%)           | 11.4  | 15.0  | 7.8   |
| N. Gear. (%)       | 56.4  | 69.9  | 39.9  |

Source: SBI E2-Capital

|                           | 09F  | 10F  | 11F  |
|---------------------------|------|------|------|
| Consensus EPS (HK\$)      | n.a. | n.a. | n.a. |
| Previous earnings (HK\$m) | -    | -    | -    |
| Previous EPS (HK\$)       | -    | -    | -    |

#### Price performance

| Year to Dec              | 1m   | 3m   | 12m   |
|--------------------------|------|------|-------|
| Relative to HSI (%)      | 12.1 | 49.3 | 187.7 |
| Actual price changes (%) | 14.6 | 0.0  | 370.0 |



Source: Bloomberg

#### Research team

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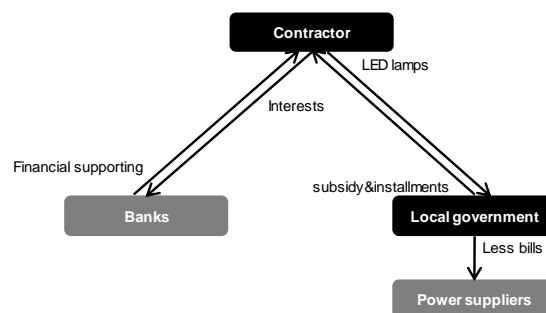
lighting systems. According to the JV agreement, 70.0% of RMB71.4m registered capital (RMB50.0m) will be contributed by TCI in cash and 30.0% by OOS by injecting 51.0% and 30.0% interest in two operating subsidiaries. The JV will have option to raise its stake in the two subsidiaries in the future.

**A win-win partnership.** We observed clear synergy between TCI and OOS:

- ❑ TCI's PCB solution is one of key parts used in OOS's high-voltage LED lamp.
- ❑ TCI's manufacturing base in Zhongshan can accommodate OOS's operation, providing sufficient room (facilities and labor resource) for further expansion.
- ❑ TCI's listing position and financial capability will contribute in winning governmental projects, considering: 1) China's LED lighting market is still fragmented and rife with small suppliers; 2) the discussed tri-party model, which requires huge working capital for contractors, will likely prevail.
- ❑ OOS has core patented technology in illuminant, heat dissipation and driving areas. Mr. Zhu Jianhqn, owner of OOS, ranks third in the PRC in ownership of individual patents relating to LED lighting.

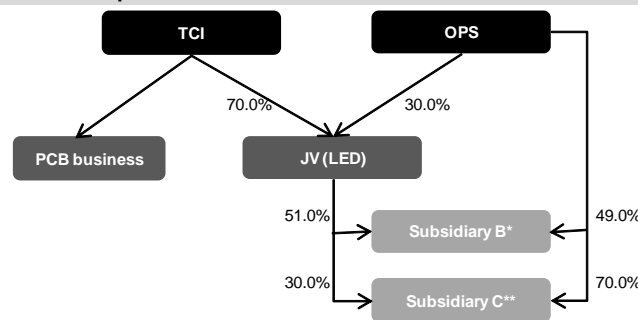
**Strong project pipeline.** Although the establishment of JV is still under some legal process, operation has already commenced. Contracts have been signed with Yangzhou, Shuangliu County and Foshan for total 55,000 LED street lamps, 40,000 of which will be delivered in 2010 and 15,000 2011. The company is also chasing several other projects (65,000 lamps), which construct pipeline for 2011 and thereafter. According to our understanding, TCI has been actively involved in the negotiation and the contracts will be implemented under the JV. A notable fact is that for all signed contracts, the government will pay directly, implying minimal extra working capital requirement for the JV and a steady cash inflow in FY12/10F accompanied with products delivery. The tri-party model will be used in new projects.

**Chart 1. Tri-party model**



Source: compiled by SBI E2-Capital

**Chart 2. Corporate structure**



Source: compiled by SBI E2-Capital

\* design and contract works of lighting products and energy saving products for city and roadway

\*\* packaging of high power LED lighting products, manufacturing of lamps and energy saving products

**Table 1. Project pipeline**

| Projects                   | No. of Street lamps | Status               | Delivery                      |
|----------------------------|---------------------|----------------------|-------------------------------|
| Yangzhou phase I           | 15,000              | Secured on 19 Nov 09 | Before Aug 10                 |
| Shuangliu County, Chengdu  | 30,000              | Secured on 30 Nov 09 | Half in 2010 and half in 2011 |
| Foshan, Guangdong          | 10,000              | Secured in Nov 09    | Within 2010                   |
| Yangzhou phase II          | 15,000              | Under negotiation    | Within 2011                   |
| Qingyuan, Guangdong        | 10,000              | Testing period       |                               |
| Nanshan district, Shenzhen | 20,000              | Testing period       |                               |
| Guangzhou                  | 20,000              | Under negotiation    |                               |
| <b>Secured total</b>       | <b>55,000</b>       |                      |                               |
| <b>Potential</b>           | <b>65,000</b>       |                      |                               |

Source: Company data

**Significant contribution to TCI's bottom line.** Price range of LED street lamp is RMB3,500-5,000. According to TCI, gross margin stands at ~50%. We used a more conservative 40.0% in our calculation. Although we do expect selling price to step down gradually, margin pressure might be moderate given the government (the buyer) has less intention to push price down in the tri-party model. Assuming a 40.5% profit sharing ratio (arithmetic average of shareholding in the two operating subsidiaries), the JV is anticipated to earn RMB14.6m in FY12/10F and RMB22.7m FY12/11F (net profit guarantee: RMB30.0m in the two years), 70.0% of which (HK\$10.2m and HK\$15.9m) will be spotted in the listco's bottom line.

**Table 2. Major assumptions and forecasts for the JV**

| Year to Dec (RMBm)                            | 10F         | 11F         | 12F         |
|---|-------------|-------------|-------------|
| LED street lamps installed (unit)             | 40          | 80          | 133         |
| ASP (RMB)                                     | 4,250.0     | 3,612.5     | 3,070.6     |
| Turnover                                      | 170.0       | 289.0       | 409.4       |
| Gross profit                                  | 68.0        | 109.5       | 146.1       |
| EBT   | 42.5        | 66.1        | 84.7        |
| Profit after tax                              | 31.9        | 49.6        | 63.5        |
| MI  | (19.0)      | (29.5)      | (37.8)      |
| Net profit                                    | 12.9        | 20.1        | 25.7        |
| Net profit attributable to TCI                | 9.0         | 14.1        | 18.0        |
| <b>Net profit attributable to TCI (HK\$m)</b> | <b>10.2</b> | <b>15.9</b> | <b>20.4</b> |
| Gross margin (%)                              | 40.0        | 37.9        | 35.7        |
| Operating margin (%)                          | 25.0        | 22.9        | 20.7        |
| Effective tax rate (%)                        | 25.0        | 25.0        | 25.0        |

Source: SBI E2-Capital

**Table 3. P&L**

| Year to Dec (HK\$m)               | 06A     | 07A     | 08A     | 1H 08A  | 1H 09A  |
|-----------------------------------|---------|---------|---------|---------|---------|
| Turnover                          | 613.2   | 741.0   | 838.9   | 397.5   | 331.5   |
| Cost of sales                     | (495.3) | (596.2) | (730.0) | (334.5) | (283.5) |
| Gross profit                      | 117.8   | 144.8   | 108.9   | 63.1    | 48.0    |
| Other income                      | 13.1    | 28.1    | 25.8    | 11.5    | 9.0     |
| Other gains and losses            | -       | (0.5)   | (1.5)   | (8.1)   | (4.1)   |
| Selling and distribution expenses | (25.1)  | (30.2)  | (30.1)  | (14.0)  | (14.6)  |
| Administrative expenses           | (46.2)  | (54.4)  | (53.7)  | (27.1)  | (21.1)  |
| Finance costs                     | (11.3)  | (17.2)  | (18.0)  | (9.2)   | (6.0)   |
| Profit before tax                 | 48.3    | 70.6    | 31.5    | 16.1    | 11.1    |
| Income tax expenses               | (9.2)   | (10.6)  | (3.8)   | (2.6)   | (1.3)   |
| Profit for the year               | 39.1    | 60.0    | 27.7    | 13.5    | 9.8     |
| Attributable to:                  |         |         |         |         |         |
| Equity holders of the company     | 39.1    | 60.0    | 27.7    | 13.5    | 9.8     |
| Minority interests                | -       | -       | -       | -       | -       |
| EPS - Basic (HK\$)                | 0.180   | 0.250   | 0.120   | 0.056   | 0.056   |

Source: Company data

**Sky-high valuation of the industry.** The LED sector is hot. Neo-neon (1868 HK), the only HK-listed LED company, is trading at 35.9x one-year forward P/E and 25.9x two-year forward. For A-share peers, the average P/E is even higher at 127.3x and 57.6x in FY12/09F and FY12/10F. By using a conservative 15.0x FY12/10F P/E, we calculate the LED JV's value at HK\$340.5m, 70.0% of which (HK\$238.3m) is attributable to TCI, versus HK\$170.4m increase in TCI's market value since 28 Sep 09, when the listco announced the JV agreement.

**Table 4. Valuation of peers group**

| Company                | Ticker    | Market cap<br>(US\$m) | Fiscal year<br>end | Historical<br>P/E (x) | 1-Yr P/E (x) | 2-Yr P/E (x) | P/B (x) | ROE (%) |
|------------------------|-----------|-----------------------|--------------------|-----------------------|--------------|--------------|---------|---------|
| TCI                    | 515 HK    | 43.4                  | 12/2008            | 14.1                  | n.a.         | n.a.         | 1.0     | 8.6     |
| LED - HK               |           |                       |                    |                       |              |              |         |         |
| Neo-Neon               | 1868 HK   | 757.6                 | 12/2008            | 64.1                  | 35.9         | 25.9         | 1.9     | 5.7     |
| LED - PRC              |           |                       |                    |                       |              |              |         |         |
| Lianchuang             | 600363 CH | 615.2                 | 12/2008            | 170.9                 | n.a.         | n.a.         | 5.6     | 4.0     |
| Changjiang Electronics | 600584 CH | 952.5                 | 12/2008            | 1,120.2               | 199.4        | 62.3         | 4.5     | 5.7     |
| Furi Electronics       | 600203 CH | 235.9                 | 12/2008            | n.a.                  | n.a.         | n.a.         | 10.0    | 4.7     |
| Sanan Optoelectronics  | 600703 CH | 2,537.3               | 12/2008            | 109.9                 | 112.9        | 86.0         | 13.9    | n.a.    |
| Silan Microelectronics | 600460 CH | 784.3                 | 12/2008            | 235.1                 | 87.0         | 54.7         | 8.2     | 1.6     |
|                        |           |                       |                    | 409.0                 | 133.1        | 67.6         | 8.5     | 4.0     |
| PCB - HK               |           |                       |                    |                       |              |              |         |         |
| Daisho Microline       | 567 HK    | 40.0                  | 03/2009            | n.a.                  | n.a.         | n.a.         | 0.7     | (4.4)   |
| Nam Hing               | 986 HK    | 43.8                  | 03/2009            | n.a.                  | n.a.         | n.a.         | 12.9    | (113.9) |
| Global Flex            | 471 HK    | 40.5                  | 12/2008            | n.a.                  | n.a.         | n.a.         | 2.3     | (124.1) |
| Sinotronics            | 1195 HK   | 63.3                  | 06/2009            | n.a.                  | n.a.         | n.a.         | 0.5     | (46.2)  |
| Fittec                 | 2662 HK   | 72.0                  | 06/2009            | n.a.                  | n.a.         | n.a.         | 0.5     | (3.5)   |

Source: Bloomberg

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